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AGRICULTURAL RESEARCH INSTITUTE
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PROCEEDINGS

OF THE

AMERICAN PHILOSOPHICAL SOCIETY

HELD AT PHILADELPHIA

FOR

PROMOTING USEFUL KNOWLEDGE

Vol. XV.

DECEMBER 1876.

No. 96.

PHILADELPHIA:
PRINTED FOR THE SOCIETY
BY M'CALLA & STAVELY.
1876.

THE
RHYNCHOPHORA
OF
AMERICA
NORTH OF MEXICO

BY JOHN L. LECONTE
ASSISTED BY
GEORGE H. HORN.

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TABLE OF CONTENTS.

Page.

PREFACE . . . vii
INTRODUCTION . . . xi
I. RHINOMACERIDÆ . . . 1
II. RHYNCHITIDÆ . . . 3
    i. Rhynchitidæ . . . 4
    ii. Pterocolidæ . . . 9
III. ATTELABIDÆ . . . 9
IV. BYRSOPIDÆ . . . 11
V. OTIORHYNCHIDÆ, by Dr. G. H. Horn . . . 13
VI. CURCULIONIDÆ . . . 112
    i. Sitonidæ . . . 113
    ii. Alophidæ . . . 115
    iii. Ithyceridæ . . . 120
    iv. Curculionidæ . . . 112
    v. Balaninidæ . . . 322
VII. BRENTHIDÆ . . . 323
    i. Brenthidæ . . . 325
    ii. Cyladidæ . . . 327
VIII. CALANDRIDÆ . . . 328
    i. Calandridæ . . . 330
    ii. Rhinidæ . . . 333
    iii. Cossonidæ . . . 334
IX. SCOLYTIDÆ . . . 341
    i. Platypodidæ . . . 342
    ii. Scolytidæ . . . 345
X. ANTHRIBIDÆ . . . 391
XI. APIONIDÆ . . . 409
APPENDIX:
    i. Corrections and New Species . . . 412
    ii. Unrecognized Species . . . 428
    iii. Corrections to the Munich Catalogue . . . 437
    iv. Economic bibliography, by B. Pickman Mann . . . 438
Index . . . 443

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THE RHYNCHOPHORA OF AMERICA, NORTH OF MEXICO.

BY JOHN L. LECONTE, ASSISTED BY GEORGE H. HORN.*

PREFACE.

The task that I have attempted to perform in the present memoir, is a very difficult one, and I feel that it has been accomplished very imperfectly.

It is, namely, from the study of the very small material represented in the fauna of temperate North America, to induce entomologists to investigate those Coleoptera, which have been heretofore classed as *Curculionidæ* and some allied, but ill-defined families, from a completely new standpoint, whereby they become isolated from all other Coleoptera.

The characters which render necessary this isolation of the Rhynchophora have been already exposed by me in some short memoirs,† and their value has been recognized by several systematists of excellent ability, although not to the extent to which I hope the present effort will render them acceptable. These characters are mainly to be found in the form of the basi-lateral elements of the head and prothorax on the under surface of the body, and will be detailed in the Introduction.

By these peculiarities of structure, as well as by their food, the Rhynchophora are restricted to a more uniform type of organization than is exhibited in the normal Coleoptera; but at the same time being represented by an immense number of species, the generic modifications are very varied. The difficulty of tabulating these generic forms in a manner to exhibit their relations to each other is therefore greatly increased.

I have previously expressed my opinion that the Rhynchophora, being the lowest type of Coleoptera, are therefore geologically the oldest. Regarding then the fixity of insect types, as shown by the resemblance of ancient forms to those of the present time, the uniformity in food and manner of life, and the immense number of genera in this complex, with which we are dealing, we have a right to expect that there will be a proportionally larger survival of unchanged descendants of those species or genera which were first introduced. We will, therefore, have a more perfect series of connecting forms than can be found in other orders of insects, whose methods of life expose them to the influences of destruction or modification by external circumstances.

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*See Proceedings, 1875, 649 (Nov. 19th); 662 (Dec. 17th).

† *Vide infra*, Introduction, p. ix.

Nevertheless, the arrangement which I have adopted, will show in the larger groups or tribes, a dominance within the limits of each tribe of one typical modification of structure, with variations in the direction of modifications which become dominant, and definitive in other tribes.

It thus comes to pass that, neglecting the essential characters of the tribe, to which the species may properly belong, the definition of the genus will approximate in language very closely to that of some other genus, belonging to a very distinct part of the series.

In other words, the genera belonging to several tribes will agree with each other in similar characters of less value than the tribal characters.

What I have just said regarding genera is equally true in respect to species. The form, color and sculpture in many instances are repeated in tribes which from their geographical distribution and method of life cannot be supposed to have any immediate genetic derivation. Instances of this kind of resemblance will be mentioned both in the Introduction, and in the body of the memoir.

I have no theory to propound regarding this very complex system of cross resemblances. They are certainly not the result of mimicry, and probably not of natural selection, or any other name of an idea which has yet been suggested. A deeper insight into the phenomena of organic nature, which may, perhaps, be acquired by our successors would give us a more reasonable explanation of these resemblances.*

My best thanks are due to my excellent collaborator, Dr. G. H. Horn, for his careful study and classification of the family *Otiorhynchidæ*, certainly one of the most difficult among the Rhynchophora, and next to the genuine *Curculionidæ*, the largest. I also owe my kindest acknowledgment to Mr. G. W. Belfrage, for a large series of specimens from Texas; to Messrs. H. G. Hubbard and E. A. Schwarz, for very full series from Michigan and Florida; to the Museum of Comparative Zoology of Cambridge for the loan of the Zimmermann collection, mostly from the Southern States; and to Messrs. E. P. Austin, W. Jülich, and Prof. C. V. Riley for large sets of specimens from various parts of the country. Other friends have also assisted me in proportion to the extent of their respective collections, and to them also I return thanks.

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* Mr. A. R. Wallace in his suggestive address to the Biological Section of the British Association for the Advancement of Science, held at Glasgow, 1876, has expressed himself quite clearly concerning the inadequate explanation of the resemblances between objects of diverse genera, tribes and families, which has thus far been offered. He comments at length on a certain relation between color and locality, not dependent on protective tendencies. This, however, is only one of several groups of curious facts which will be developed by more prolonged and minute observation. *Vide* Nature, Sept. 7th, 1876, p. 404.

It is only justice to a master spirit in Zoology, who, with more imperfect knowledge of facts than we possess, was endowed with deeper intuition than is usually given to man, that I should conclude this preface with the following quotation from Oken's Physiophilosophy 3526.* What he discerned, I have endeavored to demonstrate.

"I have also declared the Rhynchophora to be the lowest and the Lamellicornes the uppermost in rank. A view, which at present appears to be generally adopted."

Philadelphia, December 23*d*, 1876.

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* Elements of Physiophilosophy, by Lorenz Oken, M.D., from the German, by Alfred Tulk, London, Ray Society, 1847. The remainder of the section cited may be read with profit by all students disposed to accept words of advice from one who was well qualified to give instruction; but it is too long to be quoted on the present occasion, though teeming with thoughts suggestive of much that has since been adopted, without due reference to the original source.

INTRODUCTION.

Rhynchophorous Coleoptera are those in which the posterior lateral elements of the head* and prothorax† coalesce on the median line of the under surface of the body, so as to unite by a single suture.

To the first of these characters there is no exception in the wide range of the existing Coleopterous insects ; to the second there are two notable discrepancies. The first is *Nematidium,*‡ commonly classed with the *Colydiidæ,* the other is the genus *Cossyphus,*§ which has been considered as belonging to the *Tenebrionidæ,* from the other members of which it differs, not only by the structure of the under surface of the prosternum, but by other characters, which require future study for a proper appreciation of their importance.

I might rest the definition of the Rhynchophora at this point, and proceed to indicate the different series and families into which, according to the system I have developed, these insects should be divided, but before doing so, there appear to me certain relations between the members of this suborder, which are well worthy of attention; and certain characters which I have not had time to investigate fully, but which are indicated for the guidance of those, who will in future adopt the views herein set forth.

There are also certain characters common to all, or nearly all Rhynchophora, most of which I have mentioned in the two essays cited below,‖ but which for convenience may be here briefly recapitulated :

1st. There are no soft, larval, or imperfectly chitinized forms, or forms with short elytra, exposed wings, or greatly multiplied antennal joints, such as are of frequent occurrence among the normal Coleoptera.

2d. There are none in which the side pieces of the prothorax are separated by suture from the pronotum, and very few in which even the lateral margin is indicated; in many the prosternal sutures are distinct, but in some even these are obliterated.

3d. In none are the front coxal cavities open posteriorly, though in some the corneous plate formed by the coalescence of the posterior lateral elements (epimera) is very narrow; and in other cases (*Baris*, &c.) the posterior part of the prosternum is thickened and overlies the suture on the median line, but without coming into contact with the mesosternum.

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* Le Conte, American Naturalist, Feb., 1875, ix, 112.

† Le Conte, American Journal of Science and Arts, July, 1867.

‡ This genus has been recently described by Reitter, Verhandl. naturforsch. Vereines in Brunn, 1876, as belonging to the *Trogositidæ,* under the name *Filumis.*

§ Horn, Tr. Am. Ent. Soc. 1868, p. x.

‖ Am. Journ. Sc. and Arts, July, 1867; American Naturalist, July, 1874.

4th. The ventral segments never exceed five in number, and the first and second are usually larger and more closely connected, frequently even connate, with partially obliterated suture; the fifth is sometimes longer than the fourth, sometimes about equal to it.

5th. When there is any appreciable difference between the sexes, it is usually manifested by a greater elongation of the beak of the ♀♀, indicating its use as an accessory organ of generation, for making the perforation in which the egg is subsequently placed by the soft ovipositor, and pushed down by the beak.

6th. The other sexual difference is in the addition of a small dorsal (or anal) segment to the ♂♂; this character is, however, not obvious in several families, the morphological representative of this anal segment being completely retracted and covered by the pygidium. In others this segment is visible only from beneath, simulating, therefore, a sixth ventral.

7th. The very rare occurrence of articulated movable spurs at the end of the tibiæ; it is seldom, indeed, that more than one fixed mucro occurs, and in the species in which the tarsi are inserted laterally near the tip, this mucro becomes frequently elongated and curved; the outer angle of the tip is in these instances quite often prolonged into a curved digitation, like the terminal tooth of the front tibiæ of some *Scaritini*, of the family *Carabidæ*.

8th. The head is most frequently prolonged in front of the eyes, forming a beak, which is usually narrower than the front, and frequently very slender. A flattened prolongation, similar to a beak, occurs in some genera of *Cucujidæ*, *Pythidæ* and *Œdemeridæ*, but not elsewhere in the normal Coleoptera.

9th. In the vast majority of species the labrum is wanting; in some *Scolytidæ* it is feebly developed, but is present in normal form only in *Rhinomaceridæ* and *Anthribidæ*.

10th. Except in *Rhinomaceridæ* and *Anthribidæ* the palpi are short and rigid, with the joints diminishing in size; in those families they are slender and flexible, as in normal Coleoptera.

11th. In those genera in which the hind tibiæ are truncate and margined at tip, forming a surface called a *corbel*, this surface may be glabrous or scaly. In normal Coleoptera they are always glabrous, and in *Hypocephalus* alone they are densely clothed with hair.*

12th. A peculiar ridge on the inner surface of the elytra, into which the ascending margin of the metathoracic epimera and ventral segments fit, giving great firmness and solidity to the hinder part of the body. This ridge is rarely wanting; and is represented among normal Coleoptera, so far as I have examined, only in certain *Buprestidæ*.

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* LeConte, Trans. Am. Ent. Soc. v, 209.

These characters taken collectively, in addition to the two fundamental defining characters first mentioned, indicate a profound difference in organization, which isolates the Rhynchophora from all other Coleoptera. From this isolation results the necessity of classifying them upon other characters than those which are found useful in defining series and families in the normal Coleoptera. The great resemblance in general appearance of the insects of this type, and the endeavor to consider them as only a family in the whole series of Coleoptera, has caused the characters used in this memoir to be either undervalued or overlooked. I believe, however, that when attention is directed to them, and to certain other characters, which I have not had time to fully investigate, the arrangement of these insects into natural groups will be found as simple and intelligible as that of the normal Coleoptera.

Among the investigations which yet remain imperfect, I would mention as specially deserving of attention, the stridulating organs. There are in some genera spaces on the inner surface of the elytra, which have a pearly lustre, and which are probably capable, by friction against the ascending margin of the ventral segments, of producing a sound. I have mentioned these under the genus *Listronotus*, of the *Phytonomini*, but they are present in many genera of other tribes, and in fact, the *Conotracheli* and many others are known to emit a squeaking sound.

The homologies of the parts of the head, by reason of which the front portion becomes extended into a beak, and the basal piece on the under surface (which separates the gular sutures in normal Coleoptera) disappears, are also worthy of attention; so too are the larvæ, with the view of discovering some general characters in which they differ from those of other Coleoptera.

A more careful study should also be made of the antennæ of the *Scolytidæ*, by specimens mounted in Canada balsam, so that the homologies of the joints of the funicle, when they disappear may be ascertained. The subject, as treated in this memoir, is, I may say, barely sketched, and will yield to others, who may devote labor to it, not only the correction of errors I have made, but many new truths and generalizations greater in value than those to which I have attained.

The affinities of the families of Rhynchophora among themselves, and their resemblances to various series or families of the normal Coleoptera remain to be indicated.

The typical Rhynchophora, *Curculionidæ*, while exhibiting in the different tribes characters which are more individualized and combined with special structures in the other families, occupy a central position around which the latter may be grouped.

The *Rhinomaceridæ*, by the presence of a labrum and flexible palpi, as well as by the general form of body, and 11-jointed, non-geniculate antennæ, indicate a resemblance to *Rhinosimus*, &c., of the *Pythidæ*. The *Otiorhynchidæ*, in the tribes with large mentum, and the *Brachyceridæ* show strong analogy with the higher *Tenebrionidæ*, in which the buccal cavity is entirely closed by the mentum.

By the gradual obsolescence of the deciduous mandibular appendage, and the scar, which is its natural consequent, the *Otiorhynchidæ* pass almost insensibly into the *Curculionidæ*. The last named family through the *Erirhinini* is affiliated with the *Rhynchitidæ*, and through the *Barini* with the *Calandridæ* and *Cossonidæ*.

The *Hylastes* group of the *Scolytidæ* shows strong affinities with the *Cossonidæ*, and a slight reversion towards the *Cryptorhynchini* of the *Curculionidæ*.

The *Brenthidæ* are isolated, and indicate a relationship which is neither of affinity or analogy, but rather of contemporaneous origin with *Hypocephalidæ*, *Rhysodidæ*, *Cupesidæ*, and perhaps some other families of normal Coleoptera, which have been yet imperfectly studied. Nevertheless, by certain abnormal genera, not occurring in our fauna, they exhibit a resemblance in some characters to the sub-family *Platypodidæ* of the *Scolytidæ*, and connect both, by their resemblances with the *Colydiidæ* of the Clavicorn series of normal Coleoptera.*

Some of the *Scolytidæ* in form and general appearance resemble the feebler groups (*Choragus*, &c.) of the *Anthribidæ*, but the characters of the latter are so peculiar, that they must be viewed as a synthetic type, combining resemblances to very diverse series. The form of the mentum, if I have interpreted it correctly, is found only in the Adephaga (*Amphizoa*), while the great sexual differences in the length of the antennæ occur only in the *Cerambycidæ*. The well developed labrum, filiform flexible palpi, straight, 11-jointed antennæ, and epipleuræ indicate a higher organization than is found in other Rhynchophora. The complete consolidation, without sutures, of the elements of the under surface of the head and prothorax, indicate a progress along the line of true Rhynchophorous development, upon which I have based the two fundamental defining characters. The progress in this instance has been carried so far as to cause the disappearance of these very characters. If any resemblance to the normal Coleoptera could be seen to replace them, the *Anthribidæ* would be removed, as has been done with the *Bruchidæ*, to some other part of the system But this is not the case, and they must remain, therefore, as the expression of the most perfect development thus far attained in the Rhynchophorous type.†

The classification here adopted is simply that set forth by me in the memoir‡ above cited, which was read before the National Academy of

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*It will be here remembered that *Nematidium* has the median suture behind the point of the prosternum precisely as in Rhynchophora.

†In this connection it is important to remark, that while the food of the Rhynchophora is almost universally vegetable tissues, either living or dead, *Brachytarsus* is a parasite upon a Hemipteron, of the genus *Coccus*, as narrated by *Nœrdlinger*, Stettin Ent Zeitung, 1848, p. 230; Lacord., Gen. Col. vii, 481.

‡American Naturalist, July, 1874.

Sciences, at the session held at Washington, April, 1874; I have, however, left out the families *Brachyceridæ*, *Amycteridæ* and *Belidæ*, defined in that essay, but which are not represented in our fauna.

There are three series, composed of eleven families, represented in Temperate and Arctic North America, which may be diagnosed as follows:

I. Abdomen ♂♀ alike; pygidium small, elytra without lateral fold on inner surface.............................HAPLOGASTRA.
  Labrum distinct, mandibles flat, simple.......... Rhinomaceridæ.
  Labrum wanting:
    Mandibles flat, toothed on outer and inner edge Rhynchitidæ.
    " stout, pincer-shaped................ Attelabidæ.

II. Abdomen ♂♀ dissimilar; ♂ with an additional anal segment; pygidium large; elytra with acute lateral fold on inner surface................................. ALLOGASTRA.
  A. Antennæ with annulated or solid club.
    Tarsi narrow, setose.
      Gular margin prominent, prosternum excavated.................................. Byrsopidæ.
    Tarsi dilated, usually with a brush of hair beneath.
      Mandibles with deciduous tip, leaving a scar Otiorhynchidæ.
      Mandibles without scar, usually pincer-shaped............................. Curculionidæ.
  B. Antennæ with ten or eleven distinct joints..... Brenthidæ.

III. Abdomen ♂♀ alike; elytra with a distinct lateral fold on the inner surface.................................HETEROGASTRA.
  A. Pygidium vertical or declivous:
    Antennæ geniculate, clubbed; labrum wanting; last spiracle covered by ventral segments.................................. Calandridæ.
    Antennæ straight; labrum distinct; last spiracle not covered by ventral segments; pygidium deeply notched to receive sutural apex of elytra.............................. Anthribidæ.
  B. Pygidium horizontal, smaller:
    Antennæ geniculate, clubbed; terminal edge of last ventral segment acute, surrounding the last dorsal; tibiæ generally compressed and serrate.............................. Scolytidæ.
    Antennæ straight, with annulated club; maxillæ very large, palpi and ligula feeble..... Apionidæ.

Among the genera and species described in the present memoir, there will doubtless be many which, with more extended comparisons, will be found identical with those which occur in other regions. It will be a just criticism, that I have failed to identify them with those already in the books. In explanation of this, I would say that I have defined the tribes, genera and species, in many instances, by characters, which have been unnoticed or neglected by previous investigators; and finding that quite frequently, species, having a strong external resemblance, differed by structural characters of great moment, I did not feel warranted in applying to them names given to species, which agreed with them in the outline, vestiture and sculpture of the larger parts of the body, but which have been described from other zoological districts. It will be easy, by the aid of the structural characters which I have given, to identify my species with the types existing in European cabinets. I would rather that those I have named would sink into synonymy, than that, in the present condition of science, I should appear to teach false ideas regarding geographical distribution, which, when carefully studied, must give us important aid in attaining a knowledge of the causes and development of the existing order of things.

Family I. RHINOMACERIDÆ.

Mentum transverse, small, emarginate in front, supported on a very broad gular peduncle; ligula and palpi small.

Maxillæ exposed, lobes short, ciliate at tip, inner one very short; palpi 4-jointed, cylindrical, well developed. Mandibles flat, curved, acute, toothed on the inner side.

Antennæ inserted at the side of the beak near the end, 11-jointed, straight, first joint a little stouter than the second, but not longer, joints 2—6 nearly equal, 7 and 8 a little shorter and broader, 9—11 forming an elongate loose club, the last joint oval, pointed, divided transversely near the tip. All the joints are sparsely pilose, and those of the club are covered with sensitive surface.

Head prominent not deflexed, eyes convex, prominent, rounded, not very finely granulated; beak as long as the prothorax, rather flat, narrowest about the middle, wider at base and tip; without antennal grooves. Labrum distinct.

Prothorax truncate before and behind, sides convex, prosternal sutures distinct, widely separated, parallel in front, then curving inwards, and attaining the coxal cavity about the middle of its outer margin; coxal cavities rounded, confluent.

Mesosternum flat, pointed behind at the middle, coxal cavities rounded, confluent; trochantin large; epimera transverse, oblique, attaining the trochantin.

Metasternum rather long, side pieces narrow, slightly dilated externally in front.

Elytra covering the pygidium, rounded at tip, without epipleuræ, and without fold on the inner surface near the side.

Abdomen with five free ventral segments nearly equal in length; separated by straight sutures, intercoxal process acute; dorsal segments coriaceous, nearly equal in length, the last more corneous, articulating with the last ventral; anal segment of ♂ convex, not very prominent; side margin of abdomen acute, but not fitting into an elytral groove.

Anterior coxæ prominent, contiguous; middle coxæ rounded, contiguous; hind coxæ transverse, slightly separated by the acute intercoxal process, and extending to the side of the abdomen.

Legs slender, not elongated, tibiæ truncate at tip, middle and hind pair with small terminal spurs; tarsi brush-like beneath, 4-jointed, third joint broad deeply bilobed, claws divergent, simple or slightly broader at base (in our species).

This family contains a few species inhabiting the northern temperate zone, and depredating on the male flowers of coniferous trees; in which the eggs are deposited. As I have observed on a former occasion, this family is a synthetic or undifferentiated type in which the Rhynchophora make the nearest approach to the lower Heteromera; it is therefore interesting to see that it clings to a very ancient and synthetic type of vegetation

Our species all belong to one genus.

RHINOMACER Fabr.

Pubescence long and coarse:
  Prothorax not longer than wide.................... **1. pilosus.**
  Prothorax longer than wide....................... **2. elongatus.**
Pubescence short and fine.......................... **3. comptus.**

The ♂ differs from the ♀ by the front tibiæ being longer and slightly curved inwards, and the beak longer, more slender, and less dilated, at the tip. The tufts of hair at the middle of the third and fourth ventral segments of the ♀ are also present in our species.

The anal segment characteristic of the ♂ of the second series of Rhynchophora also exists in Rhinomacer, but is not prominent, and is almost concealed by the last dorsal segment, which is rounded at tip.

1. **R. pilosus,** n. sp.

Brown or blackish; antennæ and legs paler; pubescence long and coarse. Beak punctured and substriate, head densely punctured. Prothorax as wide as long, densely and strongly punctured, sides rounded. Elytra convex, parallel, elongate, coarsely punctured. Length 3.6 mm's; .15 inch.

Lake Superior, Virginia, California; four specimens.

2. **R. elongatus,** n. sp.

Blackish with a slight brassy tinge; antennæ and legs brown; pubescence pale brown, long and coarse. Beak with the outer half pale; sculptured as in the preceding. Prothorax a little longer than wide, very densely punctured, sides very slightly rounded. Elytra rather narrower than in the preceding. Length 3.6 mm's, .15 inch.

Pennsylvania four specimens. Two are dark colored; one dark with pale elytra, and one entirely pale brown.

One ♀ from Canada, with pale brown elytra has the form and sculpture of the other four, except that the prothorax is scarcely at all rounded on the sides, and is less densely punctured, and the elytra still more elongated. It may indicate another species, but I am unwilling to designate it as such without more specimens.

3. **R. comptus,** n. sp.

Form and size of *R. pilosus*; blackish with a distinct brassy tint, clothed with short whitish hair. Head and beak as in the other species. Prothorax as wide as long, rounded on the sides, more finely and densely punctured. Elytra more densely and rugosely punctured. Stem of antennæ pale brown. Length 3.6 mm's; 15 inch.

One ♀, Lake Tahoe, California; Mr. Crotch. Quite distinct by the shorter pubescence and finer and denser punctuation.

Family II. RHYNCHITIDÆ.

Mentum small, subquadrate, supported upon a long narrow gular peduncle; ligula prominent, small, palpi short.

Maxillæ exposed, palpi short, rigid, as in Curculionidæ, 4-jointed.

Mandibles toothed on the outer and inner side; capable of great lateral extension; in repose the outer apical tooth on each projects forwards, so that two small acute teeth seem to project from the mouth.

Antennæ inserted at the sides of the beak, in position varying according to the genus; 11-jointed straight, first joint not elongated, and scarcely stouter, 2—8 slender, 9—11 broader, forming a loose club, and covered with sensitive surface.

Head prominent, not deflexed, eyes rounded finely granulated; beak slender, varying somewhat in form according to the genus.

Prothorax truncate before and behind, convex, prosternal sutures not visible, coxal cavities rounded, somewhat transverse, with a distinct fissure at the outer side margin: distant in Pterocolus, confluent in other genera.

Mesosternum flat, acute behind in all but Pterocolus, and with the side pieces normal in form and diagonally divided; in that genus they are transverse, prominent, apparently undivided, and ascend between the prothorax and humeral angle of the elytra, suddenly declivous and excavated in front for the protection of the legs; coxal cavities approximate, except in Pterocolus.

Metasternum rather long, with narrow side pieces; shorter with wide side pieces in Pterocolus.

Elytra separately rounded behind, exposing the pygidium in some genera; conjointly rounded, and covering the pygidium in others, epipleuræ distinct; submarginal fold on inner face short and straight.

Abdomen with five free ventral segments, nearly equal in length, separated by straight sutures, intercoxal process acute except in Pterocolus; ♂ without additional anal segment, pygidium in both sexes triangular, deflexed; sides of segments not forming an acute edge, and not fitting into a lateral groove of the elytra.

Anterior coxæ usually conical, contiguous, and prominent; smaller, rounded and separated in Pterocolus.

Middle coxæ similar to the front ones.

Hind coxæ transverse, reaching to the margin of the elytra, or nearly so.

Legs slender, rather long, tibiæ truncate at tip, with small terminal spurs; tarsi brush-like beneath, 4-jointed, third joint broad deeply bilobed; claws bifid, or acutely toothed.

Though nearly related to the preceding family, these species are readily distinguished by the absence of labrum, and the peculiar form of mandible, which recurs again only in *Desmoris*, an Erirhine genus of Curculionidæ.

While in Rhinomaceridæ a relationship to normal Coleoptera is seen in the presence of a labrum, and better development of maxillary palpi, a similar tendency is evinced in the Rhynchitidæ by the distinct epipleuræ. In the anomalous genus Pterocolus moreover, the prothorax is distinctly and acutely margined at the sides, and excavated beneath, so as to form a large cavity for the reception of the front and middle legs. This character is seen in no other Rhynchophorous insect, and would almost warrant its reception as a distinct family. For the present however, I prefer placing it as a sub-family.

Sub-family I. RHYNCHITIDÆ.

The distinctive characters of this sub-family have been pointed out, but may be briefly resumed as follows:

Body rather elongate, or pyriform, front and middle coxæ contiguous, conical, prominent. Prothorax without side margin, not excavated beneath. Mesothorax with side pieces diagonally divided, epimera not ascending. Metathorax with narrow parallel side pieces.

Our genera are as follows:

Pygidium covered by elytra.
  Elytra punctured irregularly.................. **AULETES.**
  Elytra striate................................ **EUGNAMPTUS.**
Pygidium exposed, elytra with striæ of punctures, **RHYNCHITES.**

AULETES Sch.

Three species are known to me:

Antennæ inserted at the middle of the beak.
Black coarsely punctured, thinly pubescent............. 1. **ater.**
Antennæ inserted near the base of the beak.
Bluish black, densely punctured, thinly pubescent......2. **subcœruleus.**
Very small, brown, irregularly pubescent................3. **cassandræ.**

1. **A. ater,** n sp.

Robust, black, thinly clothed with very fine gray pubescence, which is easily rubbed off. Beak longer than the head and prothorax, nearly straight, slightly flattened above, coarsely punctured and slightly striate towards the base; head strongly punctured, eyes small, very convex. Prothorax as long as wide, slightly narrowed in front, very little rounded on the sides, strongly punctured, with a faint smooth dorsal line. Elytra twice as wide as the prothorax, very convex, deeply and coarsely punctured. Antennæ inserted about the middle of the beak. Length 3.6 mm's; .15 inch.

Illinois and Maryland; three specimens.

2. **A. subcoeruleus,** n. sp.

Less robust, blue black, thinly clothed with short suberect pubescence. Beak slender, as long as the head and prothorax, coarsely punctured, channeled towards the base; antennæ inserted near the base, head coarsely punctured, eyes larger less prominent. Prothorax a little wider than long, rounded on the sides, strongly punctured. Elytra one-half wider than the prothorax, convex, less coarsely and more densely punctured. Length 3.3 mm's; .13 inch.

Nebraska; three specimens kindly given me by Mr. Ulke.

3. **A. cassandræ,** n. sp.

Very small, less robust, yellowish brown, varied sometimes with fuscous, irregularly clothed with rather coarse pale pubescence. Beak as long as the head and prothorax, coarsely punctured; head and eyes as in *A. subcoeruleus*; antennæ inserted near the base of the beak. Prothorax longer than wide, rounded on the sides, densely punctured, with a faint smooth dorsal line. Elytra one-half wider than the prothorax, coarsely punctured, punctures arranged in rows near the base. Length 2 mm's; .08 inch.

Detroit, Michigan, and Capron, Florida; collected by Messrs. H. G. Hubbard and E. A. Schwarz, on *Cassandra calyculata.*

EUGNAMPTUS Sch.

The species of this genus are more slender in form than the other members of the family, and the legs are longer and more feeble. According to the punctuation of the head, prothorax and elytra, the species may be readily recognized:

Elytral interspaces very narrow.................... 1. **striatus.**
 “ “ wider than the striæ.
Front not channeled.
 Head feebly punctured, narrowed behind. .... 2. **angustatus.**
 “ “ not “ “ .... 3. **collaris.**
 “ more strongly punctured, antennæ stouter... 4. **puncticeps.**
Front distinctly channeled.......................... 5. **sulcifrons.**

1. **Eu. striatus,** n. sp.

Elongate, black, clothed with erect black hairs, head and prothorax reddish yellow. Beak black, coarsely punctured, distinctly carinate behind the antennæ, which are inserted about the middle and are long and slender; front sparsely punctured, obsoletely channeled. Prothorax longer than wide, sparsely coarsely punctured; dorsal line deep, abbreviated at each end. Elytra with striæ composed of deep transverse punctures closely placed; interspaces narrow, each with a row of distant but distinct punctures. Length 4.7 mm's; .19 inch.

Haulover, Florida; Messrs. Hubbard and Schwarz.

I have seen three ♀; the eyes are large, and the front rather broad and convex, as in the next species.

2. **Eu. angustatus** Gyll., Sch. Curc. v, 342; *Rhynchites ang.* Herbst, Käfer, vii, 140, Tab. 105, f. 4; *Anthribus nigripennis* Fabr., Syst. El. ii, 410; *Rhinosimus nigr.* Latr., Gen. Cr. et Ins. ii, 233; Hist. Nat. Cr. et Ins. xi, 27: *Rhynchites nigr.* Oliv., Ins. 81, 87, tab. 2, f. 39.

♂ eyes larger, front narrower, head gradually narrowed behind; middle tibiæ longer and slightly bent inwards near the tip; external apical tooth of mandibles not prominent.

♀ eyes less prominent, front wider, head broadly rounded behind the eyes and more convex; middle tibiæ straight; external apical tooth of mandibles very prominent.

Middle, Southern, and Western States to Texas. Very variable in color, but with the legs usually yellow, rarely varied with fuscous.

3. **Eu. collaris** Gyll., Sch. Curc. v, 341; *Anthribus coll.*, Fabr. Syst. El. ii, 410: *Rhynchites coll.*, Oliv. Ins. 81, 28, tab. 2, f. 40; *Rhinosimus coll.*, Latr. Hist. Nat. Cr. et Ins. xi, 27; *Rhynchites ruficollis* Germ., Ins. Nov. 188.

Middle, Southern, and Western States, to Texas. Equally variable in color, but the legs are almost always black, rarely varied with testaceous.

Of twelve specimens before me all seem to be ♀, and differ from those of the preceding species only by having the head behind the eyes cylindrical and not narrowed. It may possibly be a dimorphous form of *Eu. angustatus.*

4. **Eu. puncticeps,** n. sp.

Of the same form as *collaris,* testaceous clothed with erect hairs. Beak rather stouter less deeply sculptured, front obsoletely channeled, head coarsely and sparsely punctured, cylindrical not narrowed behind. Prothorax coarsely punctured, feebly channeled. Elytra with striæ composed of approximate punctures, interspaces wide flat, each with a row of very small distant punctures. Antennæ extending to the base of prothorax, stouter than in the other species. Length 3.6 mm's; .15 inch.

Illinois, Mr. B. D. Walsh; Georgia. I have seen but two ♀ of this species; it is easily recognized by the stouter antennæ, and more uniformly sculptured beak, which is free from the impressions and lines seen in the two preceding species.

5. **Eu. sulcifrons** Gyll., Sch. Curc. v, 343.

I refer to this species, a ♂ from Texas, sent by Mr. Belfrage. It is of exactly the same form and sculpture as *Eu. angustatus,* but the eyes are less prominent, more as in the ♀ of that species, and there is a fine but distinct frontal channel; the head is gradually and distinctly narrowed behind the eyes. The color is testaceous, with a lateral blackish vitta on the elytra gradually becoming broader behind; an extension of this dark color would give the appearance mentioned by Gyllenhal, in whose specimen the elytra were black with a blue reflexion, and pale piceous towards the base.

RHYNCHITES Herbst.

	Pubescent species..........................	2
	Glabrous species..........................	7
2.	Pubescence long erect......................	3
	" short, body red above............	1. **bicolor.**
3.	Beak bistriate and carinate at base............	4
	" flattened not carinate at base............	6. **planifrons.**

4.	Striæ distant not very distinct	5
	“ composed of large deep punctures	6
5.	Color black bronzed	2. **æneus.**
	“ blue	3. **mexicanus.**
6.	Beak narrow	4. **hirtus.**
	“ broad, dilated at tip	5. **glastinus.**

7.	Legs dark colored	8
	Legs yellow, body coppery golden	7. **aureus.**
8.	Bronzed, frontal fovea deep	8. **fossifrons.**
	Frontal fovea obsolete	9
9.	Blue bronzed, head strongly punctured	9. **cyanellus.**
	Coppery, head feebly punctured	10. **æratus.**

1. **R. bicolor** Herbst, Käfer, vii, 131, tab. 104, f. 6; Oliv., Ins. 81, 23, tab. 2, f. 31, Gyll., Sch. Curc. i, 212; *Attelabus bic.* Fabr., Ent. Syst. i, 2, 388; Syst. El. ii, 422; *Curculio bic.*, Fabr. locis variis.

An abundant species found on wild roses from the Atlantic to the Pacific coast. The head as far as the eyes, the prothorax and elytra are red in the specimens from the eastern part of the continent. I have indicated in my collection the following races:

α. Head entirely black. Oregon and California.

β. Head, stem of antennæ and legs red. Colorado.

γ. Red, except the club of the antennæ, and sides of metathorax, which are dark. Colorado.

The beak of the ♀ is shorter and stouter than in ♂, but I see no other sexual difference.

2. **R. æneus** Boh., Bull. Mosc. vi, 22; Sch. Curc. i, 215; Fahraeus Sch. Curc. v, 323.

Middle, Southern, and Western States to Colorado. A variety occurs, in which the elytra are testaceous. I observe no sexual differences in the specimens before me.

3. **R. mexicanus** Gyll., Sch. Curc. i, 227; Chevr., Col. Mex. 108.

I refer to this species one specimen from Arizona, very similar to *R. hirtus*, but of a blue color; the beak is rather shorter and broader, and slightly dilated at tip; the two striæ towards the base are equally apparent, and the front is similarly channeled. The head and prothorax are somewhat less coarsely punctured, and the elytral striæ are more evident, and composed of rather larger punctures. The differences, except in color and form of beak, are not obvious; the former may be variation, and the latter is, perhaps, sexual.

4. **R. hirtus** Oliv., Ent. 81, 26, tab. 2, f. 36; Gyll., Sch. Curc. i, 231, *Attelabus hirtus* Fabr., Syst. El. ii, 421.

Carolina to Florida.

5. **R. glastinus** Lec., Pacific R.R. Expl. and Surv., Insects, 52.

San Francisco, California. Remarkably different from our other species by the broader, shorter, and more deeply sculptured beak. No sexual differences observed.

6. **R. planifrons** n. sp.

Moderately elongate, dark blue, clothed with long erect hair. Beak slender, as long as the head and prothorax, sparsely coarsely punctured, striate in front of the antennæ, flattened behind them, and margined at the sides. Head coarsely punctured, frontal channel short, deep. Prothorax slightly narrowed in front, not rounded on the sides, sparsely punctured, feebly channeled. Elytra one-half wider than the prothorax, impressed behind the base, striæ composed of very large distant punctures, interspaces rather wide, each with a row of small but deep punctures. Length 3.5 mm's; .14 inch.

Cape San Lucas, Mr. Xántus. I have seen but one specimen. It is nearly of the same form as *R. mexicanus* but a little less robust.

7. **R. aureus**, n. sp.

Elongate, glabrous, bright coppery golden. Beak rather slender, punctured; head coarsely and deeply punctured, with a narrow smooth frontal space which is channeled. Antennæ slender, testaceous with blackish club. Prothorax longer than wide, sides very slightly rounded, coarsely and deeply punctured. Elytra one-third wider than prothorax, impressed behind the base, striæ composed of deep close-set punctures, interspaces narrow, sparsely rugose. Legs bright testaceous yellow. Length 2.3 mm's; .09 inch.

Santa Barbara, California. Abundant, Mr. G. R. Crotch. The beak seems a little shorter and broader in some specimens, which are probably ♀; otherwise I perceive no sexual differences.

8. **R. fossifrons**, n. sp.

Elongate, glabrous, bronzed; legs dark. Beak slender, as long as the head and prothorax, cylindrical, shining, sparsely punctured; head coarsely but not densely punctured, with a deep elongate fovea on the front. Prothorax strongly punctured, not narrowed in front, very slightly rounded on the sides. Elytra one-third wider than the prothorax, impressed behind the base, striæ composed of deep approximate punctures, interspaces narrow, rugose. Length 2.3 mm's; .09 inch.

One specimen, Mariposa; Dr. A. Thevenet. Of the same form and size as the preceding, but differing by the beak, frontal fovea, more rugose elytra and dark legs.

9. **R. cyanellus**, n. sp.

Of the same form, size and sculpture as the two preceding, but of a dark blackish blue color. Beak slender somewhat flattened, strongly punctured; head strongly and sparsely punctured, without frontal fovea. Prothorax and elytra as in *R. fossifrons*. Length 2.1 mm's; .085 inch.

Massachusetts and Illinois; four specimens. The subbasal impression of the elytra is less distinct than in the next species, and the general form more elongated.

10. **R. æratus** Say, Curc. 5; ed. Lec. i, 263. Gyll., Sch. Curc. i, 216. Middle and Western States. Closely related to the preceding, but the color is coppery, and the head is finely granulated, and less deeply punctured; the beak is also longer and more slender. I have one specimen of a dark blue color, resembling *R. cyanellus*, but with the head faintly punctured.

Sub-family II. PTEROCOLIDÆ.

A single species constitutes this sub-family. On account of the anomalous characters its place in the series of Rhynchophora has been changed from time to time, without very satisfactory results. The latest authority, Lacordaire, deceived by the broad form of body, and ascending side pieces of the mesothorax placed it in the neighborhood of Ceutorhynchus. A study of the mouth organs, as well as the antennæ, shows that it is allied to Auletes and Rhynchites, while the other differences require it to be received as a very peculiar and distinct type.

It differs from the genuine Rhynchitidæ by the antennæ inserted much nearer the eyes, which are suddenly but not deeply emarginate in front. The side margin of the prothorax is acute and well defined, and the under surface, with the anterior part of the mesothorax, is excavated, forming a large cavity for the reception of the front and middle legs. The elytra are sculptured with wide shallow grooves, which are confusedly punctured; the epipleuræ are distinct; the tips are widely dehiscent and separately rounded, exposing parts of three dorsal segments, all corneous and densely punctured. Front and middle coxæ small, rounded, widely separated, not prominent; posterior coxæ separated, transverse, intercoxal process broad. Tibiæ with two distinct apical spurs, tarsi dilated, claws appendiculate. Ventral segments short; pygidium less convex in the ♂, and strongly inflexed. Side pieces of mesosternum transverse, solid, ascending between the prothorax and elytra. Side pieces of metasternum wide.

PTEROCOLUS Sch.

1. **P. ovatus** Gyll., Sch. Curc. i, 240; Labram & Imhoff, Curc. 70; *Attelabus ovatus* Fabr., Syst. El. ii, 426; Oliv. Ent. 81, 11, tab. 1, f. 13; *Apotomus ovatus* Kirby, Fauna Bor. Am. iv, 205.

Michigan and Massachusetts to Florida. Easily known by its robust form and beautiful blue color.

Family III. ATTELABIDÆ.

Mentum very transverse, short, trilobed, supported on a very large quadrate gular peduncle; ligula and palpi small.

Maxillæ exposed, lobes small, palpi rigid, 4-jointed.

Mandibles flat, pincer-shaped, rather stout, toothed on the inner side.

Antennæ inserted rather on the upper surface than at the sides, straight, 11-jointed; first and second joints stouter, 9—11 larger forming a loose elongate club covered with sensitive surface.

Head prominent, not deflexed, eyes oval, finely granulated, not prominent; beak short and stout, thicker at the end beyond the insertion of the antennæ; antennal grooves short and broad.

Prothorax truncate before and behind, convex; prosternal sutures not distinct, coxal cavities confluent, rounded.

Mesosternum flat, declivous, triangular, pointed behind; side pieces short transverse, diagonally divided, epimera not attaining the coxæ.

Metasternum short, side pieces wide.

Elytra not covering the pygidium, separately rounded at tip; epipleuræ narrow but distinct; inner surface without lateral fold.

Abdomen with five short ventral segments separated by deeply impressed straight sutures, intercoxal process acute; fifth at the middle very short, being compressed by the inflexion of the pygidium; side margin not acute nor extended upwards. Dorsal segments convex, almost corneous. Pygidium small corneous, upper margin with a large deep marginal groove.

Anterior coxæ conical, prominent, contiguous; middle coxæ somewhat transverse, and a little prominent; hind coxæ transverse, nearly contiguous.

Legs stout, tibiæ serrate on the inner side, armed at the tip with two strong hooks, which represent the spurs in the two preceding families; tarsi dilated, brush-like beneath; third joint deeply bilobed; claws connate at base.

A family containing but few genera, with less than 200 species, distributed mostly in the tropics.

ATTELABUS Linn.

The species of this genus which occur in our fauna, are divided by Mr. Jekel (Ins. Saundersiana ii, 186), into three groups:

I. Glabrous; front thighs less thick, not toothed: HOMÆOLABUS.
Blue black; prothorax, neck, elytra and abdomen red... 1. **analis.**

II. Glabrous, front femora thick, strongly toothed (in ♂): SYNOLABUS.
Red; legs usually black or dark.......... .... 2. **nigripes.**
Black, elytra partly red.
Apical angles of beak not prominent................3. **bipustulatus.**
" " acute, " .... 4. **genalis.**

III. Pubescent, front femora not toothed, HIMATOLABUS. 5. **rhois.**

1. **A. analis** Illiger., Schneider's Mag. v, 616; Gyll., Sch. Curc. i, 199; Harris, Ins. Inj. Veg. 58; *A. similis* Kirby, Fauna Bor. Am. iv, 204.

♂. Ventral segments with two rows of acute tubercles; under surface of mouth flat.

♀. Ventral segments not tuberculate; under surface of mouth with two small acute teeth projecting downwards.

Abundant in the Atlantic States. With a large series of specimens before me, I cannot agree with Mr. Jekel, in separating *A. similis* as distinct on account of the darker color, and less lustrous elytra.

I have one specimen from New York in which the prothorax is very distinctly punctured, but it does not otherwise differ.

2. **A. nigripes** Lec., Ann. Lyc. Nat. Hist. (N. Y.), i, 171; pl. 11, f. 6; Gyll., Sch. Curc. i, 199.

♀. Front thighs unarmed.

♂. Front thighs strongly toothed.

Atlantic States to Kansas; abundant. The legs are usually black or dark brown; in one specimen from Texas (Belfrage), they are of the same red color as the body. In other specimens the head prothorax and part of the under surface are dark brown.

3. **A. bipustulatus** Fabr., Mant. 229; Syst. El. ii, 418; Gyll. Sch. Curc. i, 201; Harris, Ins. Inj. Veg. 58.

Atlantic States, not rare. The front thighs are armed with a small acute tooth in all the specimens I have seen.

4. **A. genalis**, n. sp.

Of the same form and size as *A. bipustulatus*, but with the apical angles of the beak acute, and projecting laterally. The color is black, not blue, the elytra are red with a large triangular scutellar spot, and a large apical blotch black; the abdomen is red. Length 3.2 mm's; .125 inch.

♂. Front thighs armed with a long slender tooth.

♀. Front thighs unarmed.

New Mexico. The species in our fauna resemble each other in form and sculpture to such an extent, that I have not thought necessary to give a more detailed description of this very distinct species.

5. **A. rhois** Boh., Bull. Mosc. vi, 21; Gyll., Sch. Curc. i, 202; *A. pubescens* Say, J. Ac. Nat. Sc. Phil. v, 252; ed. Lec. ii, 315.

Lake Superior to Virginia. Not rare on hazel bushes.

Attelabus scutellaris Say does not belong to this family, and is the type of the genus *Piazorhinus* Sch.

Family IV. BYRSOPIDÆ.

Mentum moderate in size, trapezoidal, wider in front, concave in our species; gular peduncle very small; ligula and palpi small.

Maxillæ exposed, small, palpi very short.

Mandibles stout and short, pincer shaped, without apical scar.

Antennæ short, inserted in front of the eyes, sub-geniculate; scape short, funiculus 7-jointed, the last joint wider forming part of the club in *Thecesternus*, club annulated, oval, pointed, and covered with sensitive surface.

Head strongly deflexed, beak short, stout, not emarginate at tip, separated from the head beneath by a strong gular constriction, for the reception of the antennæ. Eyes transverse narrowed beneath.

Prothorax rounded in front, deeply excavated beneath for the reception of the head and beak, coxal cavities small, confluent; prosternum visible in *Thecesternus*, as a triangular plate in front of the coxæ.

Meso- and metasternum very short, side pieces of the latter not separate.

Elytra connate, covering the pygidium.

Abdomen with the first and second ventral segments very large, connate, the suture effaced at the middle; third and fourth short, fifth as long as third and fourth united; sutures straight, very deeply impressed; intercoxal process broad. Anal segment of ♂ small, rounded at tip.

Anterior coxæ small, contiguous, rounded somewhat prominent; middle coxæ separated, small, rounded; hind coxæ small, oval, widely separated, distant from the side of the elytra.

Legs slender; tibiæ sinuate on inner side, truncate at tip, and armed on the inner side with two small terminal anchylosed spurs. Tarsi 4-jointed, narrow, joints cylindrical, setose or spinose beneath. Third joint not at all dilated or bilobed in *Thecesternus*. Claws slender, simple, separate.

This family contains but a small number of genera, all confined to the Eastern continent, except *Thecesternus* which is restricted to the interior parts of the United States, extending into Texas and eastward to Illinois. It forms a tribe distinguished from other Byrsopidæ by the peculiar conformation of the prosternum, which forms a triangular plate in front of the coxæ.

THECESTERNUS Say.

I have described (Proc. Acad. Nat. Sc., 1856, 18) what I at that time believed to be six species of this genus, in addition to the one described by Say. Subsequent investigation with more abundant material has raised some doubt in my mind as to the validity of the specific differences which I then observed.

It is quite evident that there are several species, but it is found quite impossible to define them. There are all gradations from specimens (*T. humeralis*) in which the humeral processes are fully one-third as long as the prothorax, to others (*T. morbillosus*) in which the elytra are truncate at base, and the humeral angles only slightly prolonged.

It may be regarded therefore as a genus in which the originally distinct species are becoming effaced by mixture.

The specimens which I collected in Kansas were found under dried buffalo-dung. I have since received several individuals from Illinois, Texas, and Missouri; upon one of the latter is this note, made by Mr. C. V. Riley: "Cutting off blossoms of grapevines in May; also beaten from *Carya*."

Well preserved and clean specimens are mottled with a pale ochreous crust composed of closely adhering minute scales. The bibliography is as follows:

1. **T. humeralis** Say, Curc. 8; ed. Lec. 1 267; Lacord., Gen. Col. pl. 67, f, 3; *Brachycerus humer.* Say, J. Ac. Nat. Sc. Phil. v, 254; ed. Lec. ii. 316; *Lithodus humer.* Germ., Sch. Curc. ii, 420; Lec. Pr. Ac. Nat. Sc. 1856, 18. Varieties? *Lithodus rectus, affinis, rudis, erosus* Lec. ibid, 18; *longior morbillosus* Lec. ibid., 19.

Family V. OTIORHYNCHIDÆ.

Mentum variable, sometimes large, filling the gular emargination and without peduncle, or small exposing the maxillæ and ligula and with distinct peduncle.

Labial palpi very rarely visible and then very short.

Mandibles short, stout, pincer-like, very rarely slightly scissor-like, and in one instance (*Dirotognathus*) slightly laminiform and prominent. Anterior face with a distinct scar frequently borne at the tip of a slight process.

Antennæ inserted at the sides or top of rostrum always in front of middle and usually near the tip, geniculate, 11-jointed (except in *Agraphus*), the last three forming a compact club with distinct evidences of the sutures.

Head moderately prominent, rarely (*Agasphærops*) deeply inserted; beak variable, never long and slender. Scrobes well defined, except in *Otiorhynchini*, and receiving the first joint (scape) of the antennæ in repose.

Prothorax of variable form, apex usually truncate; rarely slightly prolonged over the head, base truncate, arcuate or bisinuate, post ocular margin either truncate or with ocular lobe more or less developed, sometimes with stiff fimbriæ. Anterior coxæ contiguous (except in *Pandeletejus*).

Mesosternum short, oblique or horizontal, rarely (*Coleocerus*) protuberant; middle coxæ narrowly separated; side pieces variable, never attaining the coxal cavity.

Metasternum variable, short in Division I, usually long in Division II.

Elytra concealing the abdomen entirely from above, without trace of epipleuræ but with inflexed fold on their inner side.

Abdomen with five ventral segments, the first two connate, the others free. Intercoxal process variable.

Legs moderate; femora very rarely decidedly clavate; tibiæ straight or feebly arcuate, usually mucronate at tip and rarely with small spur-like processes (certain *Otiorhynchini*). Claws fixed or moveable, always simple, never toothed.

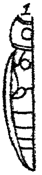
The males of all the species have the pygidium divided, so that there are eight dorsal segments, while in the female there are but seven.

This family contains all those genera in which the mandibles are provided in the pupa stage with a deciduous piece of varying form, usually elongate and slender, sometimes falcate and acute or short and conical. In the early life of the imago these pieces are lost (although specimens occur in which one, sometimes both are preserved), and the place of their attachment is indicated by a scar which is usually on the face of the mandible but frequently borne at the tip of a process of varying length. The form of the mandible itself without reference to the scar, indicates the occurrence of the deciduous piece. When the mandibles are acute at tip and one overlaps the other by an edge more or less acute, no deciduous piece can be expected. Its occurrence may always be looked for in those in which the mandibles meet with a broad surface and whose function is rather that of crushing than cutting. *Brachycerus*, *Sitones*, *Alophus* and all the *Mecorhynchi* are instances of the former, while *Cyphus, Entimus, Leptops, Ophryastes, Tanymecus,* etc., illustrate the latter form.

The family Otiorhynchidæ as defined by Dr. Leconte (American Naturalist, 1874, p. 396), has but little to do with the tribe of the same name as restricted by Lacordaire (Genera vi, pp. 20 and 144), as it includes not only the greater portion of the Adelognathes, but also several tribes of Phanerognathes in the system of the latter author.

In examining the under side of the body two forms of construction are found, by means of which this large family may be divided into two primary sections.

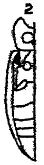
1



First. Side pieces of mesosternum very unequal, the episternum larger and attaining the elytral margin, epimeron usually small, sometimes very small. Metasternal side pieces never very wide, generally very narrow or entirely concealed by the elytral margin, anterior end never broadly dilated on both sides.

Second. Side pieces of mesosternum diagonally divided and equal or very nearly so, episternum distant from the elytral margin, separated by the epimeron. Metasternal side piece moderately wide, dilated at its anterior end with an acute process of greater or less extent projecting inwards between the mesosternal epimeron and the body of the metasternum.

2



The accompanying wood cuts have been drawn natural size from (1) *Eupagoderes speciosus* Lec., and (2) *Hippoleptops tribulus* Fab., the latter from a specimen kindly sent by Mr. H. Jekel, which although foreign (New Holland), was of sufficiently large size to allow of the drawing being made natural size. In the cut the mesosternal epimeron is left entirely black that its position as well as the form of the adjacent parts, might be rendered more evident.

An examination of the foreign genera in the cabinet of the Academy of Nat. Sc., Phila., shows that the use of the above characters may be extended to genera not represented in our fauna, and by means of them foreign genera, evidently allied, may be brought in much closer proximity than by the system adopted by Lacordaire.

No genus in our fauna presents any extraordinary or anomalous characters. It may be remarked that no native species yet known is provided with any femoral armature, and all our genera with the exception of *Agraphus* have seven joints in the funicle of the antennæ.

By reference to the synoptic tables, the extent of variation in other portions of the body may be ascertained.

In consequence of the definition of the present family by the presence of the mandibular scar, the primary characters made use of by Lacordaire sink into even less than secondary importance, and as we have in the TENEBRIONIDÆ parallel series each with genera of maximum and minimum development of mentum, so we have in the *Rhynchophora* similar parallels in the two divisions above indicated.

In taking the structure of the sternal side-pieces as a primary means of dividing this family, I have found that genera are thereby approximated which are now widely separated, and of which the best authorities on the subject since Lacordaire acknowledge the affinities. I might cite *Leptops* and *Entimus* in their approximation to *Cyphus* and *Rhigus*, the separation of *Brachystylus* from the Otiorhynchi and its position near *Cyphus* as well as *Artipus* from its present very unnatural position to a place near *Cyphus*. The character is therefore suggested as a better method of subdivision, although it is not claimed that it will in all cases be found infallible. A very limited study of the Rhynchophora will soon produce a conviction that there is on the one hand a great permanency of type of construction, and when variation of detail does occur, it is so gradual as to leave no abrupt lines of division.

DIVISION I.

This division contains those genera in which the mesosternal epimera are small, or at most moderate, the episterna in contact with the elytral margin, the metasternal side-pieces rarely of more than moderate width and not dilated at anterior end, and without the triangular process projecting between the mes-epimera and the metasternum. The other characters of the division are extremely variable, in all, however, the antennæ are strongly geniculate. All the genera of this Division in our fauna have a large mentum concealing entirely the maxillæ, excepting in the last tribe.

The following tribes are represented in our fauna:

Thorax without ocular lobes.
  Antennal grooves (scrobes) lateral directed inferiorly.. **BRACHYDERINI.**
  Antennal grooves short, superior, rarely lateral, and then directed toward the eyes ...... **OTIORHYNCHINI.**
Thorax with ocular lobes more or less distinct.
  Mentum at least moderate, concealing in great part or entirely the maxillæ. Mandibles robust not prominent, scar very evident........ **OPHRYASTINI.**
  Mentum very small, maxillæ exposed, mandibles prominent, free edge rather thin, scar small, very narrow.................................. **DIROTOGNATHINI.**

As will be seen by the above table the presence or absence of ocular lobes affords the only means of separating the tribes *Brachyderini* and *Ophryastini*, and the character must be strictly interpreted. The latter tribe has the ocular lobes sometimes very feeble and almost wanting, but as the lobes disappear the fimbriæ become more evident. In the former tribe there are no evidences whatever of either ocular lobes or fimbriæ. In one genus, the prosternum is more emarginate than usual, giving an appearance of slight ocular lobes, but no traces whatever of fimbriæ are seen. In some of the genera of *Ophryastini*, the metasternal side pieces become of moderate width, showing somewhat of an approximation to the genera of the second division. The side pieces in the other two tribes are very narrow and the sutures nearly always obliterated.

Tribe I. BRACHYDERINI.

Rostrum at least as long as the head and slightly dilated at tip, which is more or less emarginate. Front flat, rarely with a slight depression between the eyes. Scrobes moderately deep, usually distinctly limited and very oblique. Antennæ moderate, scape attaining the eyes rarely (*Trigonoscuta*) passing them. Thorax without ocular lobes or fimbriæ and not or very feebly emarginate beneath. Scutellum usually distinct. Elytra oval, not wider than the thorax. Mesosternal epimeron small, episternum attaining the elytra. Episternum of metasternum narrow suture usually distinct in its entire length. Abdomen with the first two segments (except in Gr. iv), separated by an arcuate suture, segments 3-4 short, conjointly not or but little longer than the second.

As thus constituted, the tribe is widely different from that defined by Lacordaire under the same name. From it those genera have been removed in which the mesosternal side pieces are diagonally divided and the metasternal episterna moderately wide and dilated in front. These form tribes in the next division. It is, however, extremely difficult to fix tribal limits with any degree of certainty, as every character upon which classification has been based, exhibits a degree of variability almost unparalleled in any other series of Coleoptera. The ocular lobes of the thorax especially exhibit this tendency, and the pointed outline of the eye which usually accompanies the lobe is by no means in better condition. The eye may be more nearly circular in outline with a lobe than it is without the lobe.

As thus constituted, the tribe contains the following groups :

Third joint of all the tarsi wider than the second and deeply bilobed. Tibiæ normal, not dilated at tip. Scape not passing the eyes.
  Posterior coxæ small, very widely separated......... **Minyomeri.**
  Posterior coxæ normal intercoxal process triangular or oval.
    Antennæ scaly, body beneath densely scaly. Elytra emarginate at base, thorax closely applied......... **Epicaeri.**
    Antennæ shining, sparsely hairy, body beneath nearly naked.
      Tips of hind tibiæ feebly cavernous, a double row of spinules. First abdominal suture arcuate... **Barynoti.**
      Tips of hind tibæ open, a single row of spinules. First abdominal suture straight or nearly so .. **Hormori.**
  Anterior tibiæ dilated at tip ; scape long, passing the eyes.. **Trigonoscutæ.**
Third joint of tarsi not wider than second, and feebly emarginate.. **Calyptilli.**

Group I. **Minyomeri.**

Rostrum stout, cylindrical, as long as the head, and very little narrowed to the tip. Scrobes deep, well defined, suddenly arcuate in front, gradually wider behind and passing beneath the eyes. Mesosternal side pieces unequal. Metasternal episternum linear, suture distinct. Intercoxal process very broad and very short. Hind coxæ very small. Corbels of hind tibiæ open, tarsal claws free.

The form of the head, rostrum and scrobes resembles considerably that of *Pandeletejus* of the Second Division, but the structure of the sternal side pieces excludes the present genus from any such association. According to the system adopted by Lacordaire, this genus would be placed in the *Brachyderides vrais.*

MINYOMERUS n. g.

Rostrum as long as the head, continuous with it and but slightly narrowed toward the tip, robust, slightly arcuate, feebly emarginate at tip. Head feebly transversely impressed behind the eyes, which are small, round and coarsely granulated, convex, but not prominent, scrobes moderately well defined, deep and suddenly flexed in front, gradually broader behind and passing beneath the eyes. Antennæ moderate; scape slender gradually clavate, slightly passing the middle of the eye; funicle 7-jointed, first two joints longer, the first longer than the second and stouter, 3–7 short and feebly broader externally; club elongate, oval, pointed. Thorax cylindrical, truncate at apex and base, without trace of ocular lobes or fimbriæ. Scutellum invisible. Elytra oblong oval, base truncate at middle, humeri broadly rounded. Middle coxæ moderately separated. Mesosternal side pieces unequally divided, elytra and episterna contiguous. Metasternal episternum very narrow, linear, suture distinct. Metasternum short. Posterior coxæ small, very widely distant. Intercoxal process very short. Second abdominal segment as long as the two following united, separated from the first by a suture arcuate at middle. Front and middle tibiæ feebly mucronate at tip, corbels of hind tibiæ open. Tarsi with coarse hairs beneath, third joint feebly bilobed. Claws free. Body densely scaly.

The feeble transverse impression of the head behind the eyes is a character of extremely rare occurrence, which is found also in *Proictes*, Sch. Some relationship might be expected between the two genera. I have not been able to inspect many of the genera belonging to the group *Brachyderides vrais*, but from those seen, I am inclined to think that nearly all should be referred to the Second Division of this memoir.

Two species are known to me:

Thorax slightly broader than long, sides moderately arcuate	**innocuus.**
Thorax as long as wide, slightly narrower behind...........	**languidus.**

M. innocuus, n. sp.

Form oblong oval, moderately densely scaly. Head and rostrum as long as the thorax, densely scaly and with very short erect hairs. Rostrum emarginate at tip and with small triangular depressed space; slightly swollen in front of the eyes. Occiput with transverse impression. Thorax broader than long, sides moderately arcuate, disc moderately convex, surface rugoso-punctate, sparsely scaly and with few short erect hairs. Elytra oblong oval, with rows of coarse shallow punctures closely placed, intervals feebly convex and at base feebly alternating; surface densely scaly and with indument, intervals with a row of very indistinct erect scale-like hairs. Body beneath densely scaly. Legs densely scaly and with sparsely placed short erect setæ. Length .14 inch; 3.5 mm.*

The scales are of a greyish or cinereous color, those of the thorax darker.

One specimen, Colorado.

M. languidus, n. sp.

Form elongate oval, surface densely covered with cinereous scales. Head and rostrum as long as the thorax. Head transversely impressed behind the eyes. Rostrum feebly emarginate at tip and with slight oval smooth space, surface densely scaly and with few short scale-like hairs. Thorax slightly longer than wide cylindrical, base narrower than the apex, sides nearly straight, apex and base truncate, disc regularly convex, coarsely, deeply and densely punctured, and with a slight median line. Elytra oblong oval, disc obsoletely striate, striæ with rather large, closely placed punctures, intervals slightly convex, densely scaly and each with a single row of very short scale like hairs. Body beneath and legs as in the preceding species. Length .14 inch; 3.5 mm.

Two specimens, Arizona and Fort Tejon, Cal.

In both species the deciduous piece has left a very inconspicuous scar, transversely oval in form and not prominent as in several of the following groups. I have not seen specimens with the pieces remaining. The mentum fills completely the gular emargination which is nearly semicircular in form. The genæ are notched opposite the bases of the mandibles. The distance between the posterior coxæ is equal to the length of the first two abdominal segments, and the coxæ are not larger than those of the middle pair.

Group II. **Epicaeri.**

The species composing this group are more or less pyriform, the body above and beneath densely scaly, the elytra of a pale-brownish or luteous color with the tip and two sinuous bands much paler. The rostrum is rather stout, usually longer than the head, the scrobes deep, well defined, and rapidly descending. The supports of the deciduous pieces of the mandibles are moderately or very prominent.

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* The measurements here given as well as all to follow in the present paper, are taken from the apical thoracic margin to the tip of the elytra, as this is more certain and invariable than if the measurements are taken from the tip of the beak, which varies in length.

The genera known to occur in our fauna may be recognised by the following table:

Articular face of hind tibiæ glabrous, support of deciduous piece moderately prominent.	
Antennæ stout, last joint of funicle short broad, and very close to the club. Joints 1–2 of tarsi, glabrous........................	**GRAPHORHINUS.**
Antennæ more slender, joints of funicle conical, the last distant from the club. Tarsi pubescent................................	**EPICÆRUS.**
Articular face of hind tibiæ scaly. Support of deciduous piece very prominent. Antennæ rather slender, club distinct.........	**ANOMADUS.**

The deciduous pieces of the mandibles are shown in one species of *Epicærus* They are falciform, moderately robust, obtusely pointed, with the upper inner side concave, smooth and shining.

GRAPHORHINUS Sch.

Graphorhinus Schönherr, Gen. Curc. i, p. 510; indicated but not described by Say.

This genus has all the essential characters of *Epicærus*, and differs only in the following particulars:

Antennæ shorter, scape slightly clavate, attaining the eyes, funicle 7-jointed, first two joints slightly larger than the others, 3–6 as broad as long, the seventh broader than long, and in close proximity to the club, the latter broadly oval and pointed at tip. Eyes nearly round, slightly transverse. Cotyloid cavities of hind tibiæ terminal (*corbeilles ouvertes*) and glabrous, tarsi beneath glabrous slightly fimbriate near the tips.

By the above characters it will be seen that the genus differs from *Epicærus* in the form of the antennæ, the form of the posterior cotyloid cavities and the vestiture of the tarsi. The species below being the type of the genus, and as it differs in several particulars from the *Graphorhinus* as described by Lacordaire from other species, these should constitute another genus differing in the form of the antennæ and the vestiture of the tarsi.

G. vadosus Say, Curcul. p. 8; Am. Ent., p. 267; Gyll. Schönh.. Gen. Curc. i, p. 511.

Body pyriform robust. Rostrum robust, quadrangular, slightly longer than the head, tip feebly emarginate and with a smooth triangular space limited behind by a chevron-like ridge behind which is a groove, above trisulcate and a moderately deep transverse impression between the eyes, median sulcus broad, lateral sulci short but deeper; surface densely clothed with cinereous scales and sparsely punctured. Thorax slightly broader at base than long, sides arcuate converging to the apex, which is truncate, base arcuate; median line distinct, surface coarsely punctured and irregular, densely clothed with cinereous scales. Elytra broadly oval, very curved, slightly broader at base than the thorax, indistinctly striate, striæ with moderately coarse punctures, intervals alternately more convex, subcostiform, surface densely scaly, scales cinereous with a narrow triangular basal space, submedian and subapical transverse bisinuous fascia of darker color. Body beneath coarsely but sparsely punctured, densely scaly. Legs densely scaly. Tarsi glabrous beneath. Length .28–.38 inch ; 7–10 mm.

This species has the same style of coloration as is seen in *Epicærus*, but the darker elytral fasciæ are at times absent.

Occurs in Kansas and Texas, and is not rare.

EPICÆRUS Sch.

Epicærus Schönherr, Gen. Curc. ii, p. 323.

Rostrum as long or slightly longer than the head, and nearly as broad, parallel, feebly canaliculate along the middle, tip feebly emarginate and with a triangular smooth space limited by an arcuate groove. Scrobes moderately deep, well defined, passing immediately beneath the eye and moderately arcuate. Eyes slightly longitudinally oval. Antennæ moderately long, scape gradually clavate, attaining nearly the middle of the eye; funicle 7-jointed, joints obconical, 1–2 moderately elongate, 3–4–5 nearly equal, 6–7 very slightly longer than last, not close to the mass which is elongate oval. Thorax variable, conical or cylindrical and narrowed in front. Scutellum very small. Elytra oval, broadly but feebly emarginate at base. Legs moderate. Tarsi spongy pubescent beneath. Body pyriform or elongate, densely scaly. Cotyloid cavities of hind tibiæ internal, glabrous, tip of tibiæ truncate. First suture of abdomen arcuate at middle.

Two species of Epicærus occur in our fauna.

Thorax not wider at base than at middle, form more or less elongate, narrowed at middle.................. **imbricatus.**
Thorax conical widest at base, body pyriform......... **formidolosus.**

E. imbricatus Say, Journ. Acad. 1824, p. 317 ; Germ. Sch. Gen. Curc. ii, p. 267 ; Bohem. Sch. Gen. Curc. vi, 2, p. 280.

Form variable. Rostrum feebly sulcate at middle and with a slight preocular impression, surface sparsely punctured densely scaly. Vertex with impressed puncture. Thorax cylindrical narrowed at anterior third, surface with deeply impressed punctures in great part concealed by densely placed scales, cinereous along the middle, darker at the sides. Elytra not striate but (when denuded) with rows of large deep punctures, surface densely scaly, color cinereous, with basal space, submedian irregular, and subapical sinuous fasciæ darker in color. Body beneath and legs densely scaly, scales nearly white. Length .30–.46 inch ; 7.5–11.5 mm.

This species occurs in every portion of our territory east of the Rocky Mountains and south and west of Pennsylvania, and exhibits a very great variation in form and coloration. The elytra may be elongate oval or broadly oval, and the tip vertical or inflexed, sometimes compressed, like the prow of a vessel. In color the surface may vary to entire cinereous or even in great part fuscous.

E. formidolosus Boh. Schön. Gen. Curc. vi, 2, p. 284.

Body ovate. Rostrum feebly sulcate at middle, pre-ocular impressions very faint, vertex with impressed puncture; surface sparsely punctured and densely clothed with pale cinereous scales. Thorax conical, sides feebly arcuate, shorter than broad at base, surface sparsely punctured, densely scaly. Elytra broadly oval, sub-inflated, but little longer than wide, with rows of moderate punctures not closely placed, surface densely scaly with very short semi-erect scale-like hairs in the intervals. Body beneath and legs densely scaly. Length .16–.26 inch; 4–6.5 mm.

The depth of the median rostral groove varies greatly in the specimens before me. The elytra continue very nearly in their curve the line of the sides of the thorax, and their color above is almost precisely that of the preceding species. Two specimens before me are totally cinereous, and two others fasciate. The erect scale-like hairs of the intervals while very distinct in the present species, are very indistinct in the preceding, so that no special mention is made of them.

The specimens before me are from Georgia and Florida,

ANOMADUS n. g.

Rostrum as long as the head and not narrower, sub-cylindrical, slightly dilated at tip; tip triangularly emarginate and with a smooth space. Scrobes deep, arcuate, passing slightly in front of the eye. Antennæ sub-terminal, long; scape gradually clavate; funicle 7-jointed, joints 1–2 moderately long, nearly equal, joints 3–6 short, equal, joint 7 slightly longer and distant from the club which is elongate oval. Eyes oval, slightly longitudinal. Thorax cylindrical, sides moderately arcuate. Scutellum very small. Elytra regularly oval, conjointly emarginate at base, not wider than the thorax, humeri rectangular. Legs moderate, femora slightly clavate, tibiæ straight. Cotyloid cavities of hind tibiæ internal, scaly, tip of tibia truncate.

The supports of the deciduous mandibular pieces are much more prominent in this than in any other genus in the tribe. Following the system of Lacordaire one would be compelled to call this genus *Artipus*. This latter cannot however be placed in the present tribe, or even in this first division as the form of the meso- and metasternal side pieces agree with the genera allied to *Cyphus* as will be seen further on.

A. obliquus, n. sp.

Body oblong, narrower at middle. Rostrum very sparsely punctured, densely clothed with scales of pearly lustre, darker at the sides, with few erect scale-like hairs. Thorax slightly longer than wide, moderately convex, cylindrical, truncate at apex and base, sides arcuate, surface coarsely but sparsely punctured densely scaly, at middle pearly, at sides fuscous. Elytra regularly oval, convex, with rows of moderate punctures not closely placed, surface densely scaly with short setæ distantly placed in the intervals, scales pale cinereous with a common basal triangular space as long as wide, a very oblique fascia extending from behind the humeri to the suture, and an indistinct transverse sub-apical fascia all fuscous. Body beneath and legs densely clothed with pearly scales with short setæ sparsely interspersed. Length .20 inch ; 5 mm.

This insect reproduces exactly the form or coloration of some of the smaller specimens of *Epicærus imbricatus.*

One specimen from the Peninsula of Lower California.

Group III. **Barynoti.**

Rostrum moderately stout, longer and slightly narrower than the head, sub-cylindrical, slightly dilated at tip which is slightly notched, upper side finely sulcate. Scrobes deep, slightly arcuate passing immediately beneath the eyes, which are large, oval, and slightly oblique. Scape slightly clavate, attaining the middle of the eye, surface glabrous and slightly ciliate ; funicle 7-jointed, joints 1–2 longer, joint 3 conical, 4–7 rounded, club elongate oval. Thorax subquadrate, slightly narrower in front, apex truncate, base slightly arcuate. Scutellum small. Elytra moderately oval, convex, base broadly emarginate and slightly wider than the thorax, humeral angles distinct in front. Thighs moderately clavate, anterior tibiæ slightly arcuate, middle and posterior slightly dilated at tip, all slightly mucronate. Hind tibiæ with a double row of fimbriæ surrounding an oval smooth space (*corbeilles cavérneuses*). Tarsi moderately dilated, pubescent beneath, claws free.

BARYNOTUS Germ.

Barynotus Germ. Ins. Spec. Nov. p. 337.

This genus alone represents this group in our fauna containing one species which occurs also in Europe.

B. Schœnherri Zetterst. Ins. Lapp. I, p. 187 ; Bohem. Schön. Gen. Curc. vi, 2, p. 250.

Head and rostrum as long as the thorax, rather coarsely and deeply but sparsely punctured, sparsely pubescent at sides and tip. Thorax sub-quadrate, sides behind parallel, anterior third convergent, apex truncate, base broadly arcuate ; surface moderately deeply punctured, punctures moderately coarse with finer punctures in between, at sides punctures coarser and deeply circumvallate ; median line finely impressed ; surface sparsely clothed with pearly scales. Elytra slightly broader at base than thorax oval, moderately convex, base broadly emarginate, surface clothed with scales of pearly lustre with intermixture of cupreous and greenish scales, and with rows of moderately coarse punctures ; intervals alternately slightly more convex and (where denuded) moderately densely punctulate. Body beneath coarsely, densely aud deeply punctured and sparsely pubescent, the pubescence denser on the metasternal side pieces. Legs black sparsely punctured. Length .33 inch ; 8.25 mm.

One specimen from the south of Newfoundland given to Dr. LeConte by M. Putzeys, of Brussels. The specimen is nearly entirely deprived of scales and black.

Group IV **Hormori.**

Rostrum longer and narrower than the head, subcylindrical at base, broader at tip, alæ moderately divergent, apex emarginate and with a V-shaped elevated line, median line distinctly impressed. Scrobes deep in front, and moderately arcuate, posteriorly feebly marked and directed beneath (*Hormorus*) or toward the lower border of the eye (*Agasphærops*). Antennæ moderately long, attaining the middle of the eye in the former and barely reaching the eye in the latter. Eyes moderately or very prominent. Metasternal side pieces almost entirely concealed by the elytra; metasternum short. Intercoxal process broad, truncate, second abdominal segment but little longer than the third and separated from the first by a straight suture. Corbels of hind tibiæ open, claws of tarsi free.

The supports of the deciduous pieces of the mandibles are very prominent, obliquely truncate and pointed at tip; the deciduous pieces do not exist on any of the specimens before me. The open posterior corbels and the straight first abdominal suture would seem to place the two genera here included in Lacordaire's *Blosyrides* with which, however, they have but little in common.

Two genera are thus separated:

Scape attaining the middle of the eyes, the latter moderately prominent, without posterior orbit.	**HORMORUS.**
Scape barely attaining the anterior margin of the eye, the latter spherical, prominent and with posterior orbit..............................	**AGASPHÆROPS.**

These two genera have the elytra at base feebly emarginate and somewhat broader than the thorax, the humeri being broadly rounded in the latter and subrectangular in the former genus. There is also a close superficial resemblance to *Otiorhynchus*, especially in the second, where the surface is black and with few and inconspicuous scales. *Hormorus* is however more ornate as will be seen in the description. I have endeavored to find genera to which these are allied, but with the work of Lacordaire and the limited foreign collection at my disposal I am entirely unable to do so, I must therefore describe them so far as to make them recognizable in our fauna and leave their relationships for future determination.

HORMORUS n. g.

Rostrum longer and narrower than the head, cylindrical at base, slightly dilated at apex, alæ moderately prominent, tip acutely emarginate and with a V-shaped line and on each side a groove, median line finely impressed, terminating in a broad shallow impression and between the eyes in a slight puncture. Mandibular processes prominent, obliquely truncate and acute at tip. Mentum slightly retracted, in great part concealing the other oral organs. Eyes round, moderately prominent. Scrobes moderately deep in front, slightly arcuate and well defined, posteriorly vague and passing immediately beneath the lower margin of the eye. Antennæ moderately long, scape gradually clavate, attaining the middle of the eye ; funicle 7 jointed, the first two slightly longer and subequal, 3-7 obconical, the last slightly broader but distant from the club which is oval, acute and distinctly articulated. Thorax oboval, without ocular lobes or fimbriæ. Scutellum invisible. Elytra oblong oval, feebly emarginate at base and slightly wider than the thorax. Mesosternal process nearly vertical. Metasternum short, side pieces with distinct suture, but almost entirely covered by the elytra. Intercoxal process broad, truncate, second segment not as long as the two following united, separated from the first by a very nearly straight suture. Tibiæ mucronate, the anterior and middle denticulate within, corbels of hind tibiæ open, glabrous, tarsi normal, claws free, Body above sparsely scaly in irregular bands and patches.

H. undulatus Uhler (*Chlorophanus*) Proc. Acad., 1855, p. 416.

Form elongate oval, dark brown, ornate with pearly scales. Head and rostrum as long as the thorax, moderately densely punctured, sparsely covered with pearly scales and recumbent scale-like hairs. Thorax slightly longer than wide, broadest in front of middle, sides arcuate in front, slightly convergent towards the base, apex truncate and with feeble constriction behind the margin, disc moderately convex, median line distinctly impressed, surface coarsely and closely tuberculate, each tubercle punctured at summit and with a scale-like hair, lateral margin with a narrow line of pearly scales. Elytra oblong oval, narrower in the male, disc moderately convex, suddenly declivous at apex, surface with striæ of large, deep, closely placed punctures, intervals narrower and with granules moderately elevated; surface ornate with pearly scales, arranged in the form of a humeral lunule and an irregular patch on each side of the declivity. Body beneath densely punctured, sparsely covered with scale-like hairs and with a patch of pearly scales on each side of metasternum. Legs piceous, sparsely hairy, femora with few scales near the tip. Length .30 inch; 7.5 mm.

Occurs in Canada, Maryland, Illinois.

AGASPHÆROPS n. g.

Rostrum much longer than the head, cylindrical at base, dilated in front, alæ prominent, above with deep median groove, tip feebly trisinuate, a V-shaped elevated line and on each side a broad groove. Supports of deciduous pieces prominent, obliquely truncate and acute at tip. Mentum filling the gular emargination. Scrobes deep and visible from above in front, feebly arcuate, gradually feebler posteriorly and passing immediately beneath the eyes. Antennæ moderate, scape short, moderately robust, gradually clavate, nearly attaining the anterior margin of the eye; funicle 7-jointed, one and a-half times the length of the scape; joints 1-2 sub-equal, longer than the others, 3-7 short, obconical; club oval. Eyes round, prominent, surrounded by a moderately deep orbital groove. Head short, deeply inserted, hemispherical. Thorax without ocular lobes or fimbriæ. Scutellum invisible Metasternum short, side pieces nearly concealed, suture distinctly visible. Intercoxal process broad, feebly arcuate in front, second abdominal segment as long as the two following united, separated from the first by a straight suture. Anterior and middle tibiæ feebly mucronate, corbels of hind tibiæ open, tarsi normal, claws free.

The general aspect of the unique species is such that, were the scapes of the antennæ long, I would have placed the genus in Otiorhynchini.

A. nigra, n. sp.

Elongate oval, *Otiorhynchus*-like, black, sub-opaque. Head and rostrum as long as the thorax. Rostrum deeply grooved at middle, coarsely punctured and glabrous. Antennæ piceous. Thorax cylindrical, as long as wide, sides moderately arcuate, disc convex, surface with coarse closely placed tubercles, each perforated at summit and bearing an indistinct scale. Elytra oval, base feebly emarginate and wider than the thorax, humeri broadly rounded, disc moderately convex, surface with rows of coarse, sub-quadrate punctures, intervals with flattened tubercles each perforated and with an indistinct scale. Body beneath black glabrous, coarsely and densely punctured. Legs black, more sparsely punctured. Length .30 inch; 7.5 mm.

Two specimens. Mendocino, Cal.

Group V. **Trigonoscutæ.**

Anterior tibiæ with the outer apical angle prolonged. Articular surfaces of hind tibiæ strongly cavernous and scaly.

TRIGONOSCUTA Motsch.

Trigonoscuta Motsch. Etudes Entomol. I, 1852, p. 79.

Rostrum sub-cylindrical, slightly longer and narrower than the head, separated from the head by a fine impressed line, above finely canaliculate, tip truncate. Scrobes deep, arcuate, passing near the lower margin of the eyes. Antennæ moderately long; scape gradually clavate, passing the eyes posteriorly; funicle 7-jointed, 1–2 longer sub-equal, 3–7 obconical, gradually shorter and broader, club oval. Eyes oval, slightly oblique. Thorax sub-tranverse, truncate at base and apex. Scutellum small, triangular. Elytra oval ♂ or broadly oval ♀, humeri rounded. Legs moderate, femora moderately clavate, anterior tibiæ dilated at tip, and with the middle tibiæ slightly swollen at middle; hind tibiæ very obliquely truncate, the articular surfaces cavernous and scaly. Tarsi spongy and villous beneath, median line glabrous last joint long, claws moderate, free. Intercoxal process very broad, slightly rounded in front. Second segment of abdomen longer than the two following united, separated from the first by an arcuate suture. Body scaly and hairy.

The supports of the deciduous pieces are not prominent. These pieces are rather long, very feebly arcuate and obtuse at tip. The generic description given by Motschulsky is so extremely vague and short as to be entirely valueless, and in strict justice the genus should be credited to Lacordaire.

T. pilosa Motsch. Etudes Entom. I, 1852, p. 79; Lacord. Genera, Atlas pl. 61, fig. 5, a–b.

Form oval, robust, surface densely covered with cinereous scales and moderately long greyish hairs sparsely placed, elytra irregularly variegated with fuscous. Head and rostrum as long the thorax, densely scaly and sparsely pilose. Antennæ rufous, hairy. Thorax broader than long, narrower in front, sides strongly arcuate, disc convex, surface moderately densely scaly. Elytra rather broadly oval, humeri broadly rounded, sides feebly arcuate and slightly acuminate posteriorly, disc convex, with rows of moderately fine punctures, surface densely scaly and sparsely pilose. Body beneath moderately densely scaly and with rather longer hairs than the upper surface, last three segments of abdomen distinctly pubescent. Legs more sparsely scaly and with rather long greyish hairs. Length .22—.36 inch; 5.5—9 mm.

The males have the metasternum and abdomen broadly concave. The scales covering the elytra and, in fact, the entire upper surface are very variable in coloration. The ground color is a cinereous usually very irregularly mottled with fuscous. Occasionally specimens occur in which the elytra are pale ochreous with an irregular band on the middle of each elytron becoming gradually broader behind, nearly uniting at the suture.

This species is not rare on the sea-coast at San Francisco, Cal.

Group VI. **Calyptilli.**

Rostrum not longer than the head, sub-quadrangular, very slightly narrowed toward the tip and but little narrower than the head. Eyes round, coarsely granulated and almost entirely concealed from above by a small tubercle. Scrobes lateral, arcuate, deep. Thorax without ocular lobes or fimbriæ. Scutellum very indistinct. Mesosternal side pieces very unequal. Metasternum short, side pieces moderate, suture obliterated. Abdomen normal, intercoxal process broad truncate in front. Tarsi with coarse spinous hairs beneath, third joint not wider than the second and feebly emarginate, last joint moderately long, claws free. Anterior tibiæ feebly mucronate and digitate at tip with four or five coarse spinules, articular cavities of hind tibiæ cavernous.

The gular emargination is moderately large and without sub-mental peduncle. The mentum is nearly semicircular in shape and partially exposes the other oral organs, the maxillæ being slightly visible at the sides and the ligula at tip.

The combination of characters above given will be found very difficult to place in any tribe of Lacordaire's system. The genus can not be called *Phanerognath*, as the mentum conceals the greater portion of the oral organs, and I am equally at a loss for a position in the *Adelognath* series.

The occurrence of narrow tarsi in this portion of the series is certainly a remarkable circumstance and serves to illustrate the almost utter impossibility of dividing any portion of the Rhynchophorus sub-order without apparently doing violence to some important character. As the present is the first occurrence of this character, it might be here observed that two others always accompany it (in our fauna) viz.:—The approximation of the last joint of the funicle to the club and the tarsi more or less spinous beneath. *Ophryastes*, *Rhigopsis*, and *Cimbocera*, the only genera of Otiorhynchidæ in our fauna with narrowed tarsi, all have the other two characters. The tarsi may, however, be more or less spinous in other genera, but the antennal character never occurs without narrowed tarsi.

CALYPTILLUS n. g.

Rostrum not longer than the head, sub-quadrangular, slightly narrower in front, a feeble trace of transverse impression at base, above flat, tip broadly emarginate; head with a tuberculiform process over each eye. Scrobes deep, arcuate, well defined, passing beneath the eyes. Eyes round, moderately convex, coarsely granulated. Antennæ moderate, scape gradually stouter, slightly arcuate, passing the eyes behind; funicle 7-jointed, very little longer than the scape, first joint longer and stouter, second nearly as long; 3–7 short gradually broader, the last very close to the club, the latter oval, distinctly articulated. Thorax transversely oval, neither lobed nor fimbriate behind the eyes. Scutellum scarcely visible. Elytra broadly oval, base feebly emarginate, humeri broadly rounded. Femora rather feebly clavate. Tibiæ especially the anterior with coarse spinules at tip. Metasternum short. Second segment of abdomen as long as the two following, first suture arcuate at middle. Body densely scaly and hispid.

C. *cryptops, n. sp.

Form broadly oval, densely covered with brownish cinereous scales, irregularly variegated with darker color. Head and rostrum as long as the thorax, densely scaly and with few short erect clavate hairs. Thorax oval, broader than long, apex and base truncate, sides regularly arcuate, disc moderately convex, surface granulato-punctate, sparsely scaly near the sides and with short erect clavate hairs. Elytra broadly oval, moderately convex, one-half wider than the thorax, humeri broadly rounded, sides feebly arcuate, apex obtuse, surface faintly striate, striæ with distant punctures, intervals flat, densely covered with brownish cinereous scales, irregularly clouded with darker color and each interval with a row of very short sub-erect scale-like hairs, slightly clavate. Body beneath covered as above. Legs sparsely scaly. Length .10 inch; 2.5 mm.

The form and general aspect of the species is that of a *Trachyphlœus*. The surface color deprived of scales is dark castaneous.

One specimen, New Mexico.

Tribe II. OPHRYASTINI.

This tribe as here interpreted, corresponds very nearly with the *Leptopsides* of Lacordaire, as far as our genera are concerned. Lacordaire in cludes very heterogeneous material as must be evident to even a superficial observer. No one can deny the necessity of approaching *Entimus* and its allies to *Cyphus*, forming a distinct tribe, however, from the latter, and at the same time *Leptops* must be similarly dealt with, and should probably be placed with the *Entimides*. As far as I have studied the majority of the genera of the group *Leptopsides* vrais, should remain in the present tribe.

As *Leptops* belongs to my second division, I have been compelled to change the name of the tribe, and have adopted that of our most prominent genus.

As interpreted in the present paper, this tribe has the following characteristics:

Rostrum moderately or very robust, quadrangular or sub-cylindrical. Mandibles robust, never prominent or laminiform at tip, scar round, very distinct and sometimes prominent. Mentum large or at least moderate, concealing in great part the other oral organs, sub-mentum rarely feebly pedunculate. Scrobes lateral, rarely (*Phyxelis*) visible from above, directed either toward the middle of the eyes or inferiorly. Antennæ moderate, scape always attaining at least the eye, funicle 7-jointed, the last usually free, rarely (*Cimbocera* and *Ophryastes*) contiguous to the mass. Thorax always with distinct ocular lobes which are frequently fimbriate. Metasternum usually very short, side pieces usually narrow, suture nearly always visible. Mesosternal side pieces unequally divided, episternum and elytral margin contiguous. Intercoxal process at least moderately, sometimes very broad (*Rhigopsis*). Abdomen variable, second segment longer than the two following united (except in *Ophryastes*), and with the first suture arcuate (except in *Ophryastes* and some *Strangaliodes*). Tarsi variable, usually pubescent beneath, sometimes spinous; third-joint usually deeply bilobed and broader, rarely simply emarginate and not wider than the second, (certain *Ophryastes*, and in *Cimbocera* and *Rhigopsis*). Claws always free. Body always apterous.

The tribe contains moderately homogeneous material but with evident tendencies in some of the genera to closely approximate those of neighboring tribes, especially is this the case in those genera with the feebler ocular lobes. Thus *Phyxelis* approaches *Trachyphloeus* and *Phymatinus* to *Otiorhynchus*. There is very little tendency to approch DIVISION II, *Phymatinus* alone having the mesosternal side pieces nearly equally divided but the metasternal parapleuræ are not at all like those of that division.

The genera of the tribe form the following groups:

Rostrum robust, quadrangular, more or less distinctly trisulcate above.
  Scrobes rapidly inferior, well defined. Eyes always narrow and acute below, partially concealed by the ocular lobes.
  Abdomen with second segment rarely as long as the two following together, first suture straight. Intercoxal process moderately wide.. **Ophryastes.**

Abdomen with second segment longer than the two following together, first suture strongly arcuate. Intercoxal process very broad .... **Rhigopses.**

Rostrum less robust, sub-cylindrical, never sulcate above. Scrobes feebly inferior, usually directed toward the eyes or visible from above and badly defined. Eyes oval, not acute below and usually entirely free.

Scrobes entirely lateral............................. .. **Strangaliodes.**

Scrobes visible from above........................ **Phyxeles.**

The groups as above defined are very distinctly limited in our fauna, the last group alone being of doubtful value.

In this tribe, occur genera with the narrow third tarsal joint, which however, is not of the form seen in the BYRSOPIDÆ. This character will be spoken of at greater length in the genera in which it occurs.

Group I. **Ophryastes.**

Rostrum robust, angular, more or less distinctly trisulcate, tip feebly emarginate with a small triangular smooth space. Antennæ moderately robust, scaly, scape gradually thicker, nearly attaining the eyes, funicle 7-jointed, the last joint contiguous to the club which is oval. Scrobes deep, passing obliquely downwards in front of the eyes. Eyes oval, transverse, pointed beneath. Thorax variable in form, either oval or transverse, and with callosities at the sides. Elytra oval or oblong. Scutellum wanting. Abdominal sutures straight, second segment equal to, or very little longer than, the third. Tibiæ not mucronate at tip. Tarsi variable. Claws free.

The articular surfaces at the tips of the hind tibiæ are very nearly terminal and in great part scaly. Lacordaire calls them "*caverneuse,*" but I think without reason (for the majority of the species). They are cavernous in some *Eupagoderes*. The mesosternal side pieces are very unequal, the epimeron being very small. The metathoracic episternum is moderately broad and the suture more or less distinct. In all the species the ophthalmic lobes are of moderate size and fimbriate. The surface of the body is densely scaly and without any pubescence.

Two genera appear to be indicated in our fauna.

Tarsi slender, third joint not wider than second, and simply emarginate. Sides of thorax with tuberosities more or less marked. Tips of tarsal joints beneath spiniform............................. OPHRYASTES.

Tarsi dilated, third joint usually wider than second and deeply bilobed. Thorax oval without tuberosities, tarsi beneath not spinous at tip.................. .... EUPAGODERES.

In the first genus the elytra are broadly oval, in the second elongate oval. In the latter also, the legs are longer.

OPHRYASTES Schönh.

Ophryastes Schönherr, Curcul., i, p. 508.

The species of this genus as restricted by the preceding table, are not numerous, and have a facies at once distinguishing them from the following genus. They are all of robust form, elytra rather broadly oval and the surface densely scaly, either cinereous or whitish, ornamented with stripes or spots of a much darker color. Considerable variation within specific limits is found, not only in color but also in form. All the species with but one exception, have at the base of the rostrum a distinctly marked transverse impression and the vertex thus appears convex. The tenth elytral stria in the larger species is very distinct at its basal third, and as distant from the ninth as the latter is from the eighth, at middle the stria is not evident, and at its apical third very close to the ninth. In the smaller species, in which also the thoracic tuberosities are very feeble, the tenth stria is entirely obliterated. The deciduous mandibular piece is moderately long, acute at tip, slightly arcuate. This piece when cast leaves merely a a scar without any process.

In accordance with the characters our species may be tabulated in the following manner:

Tenth elytral stria distinct at basal third. Thoracic tuberosities large..	1
Tenth elytral stria almost entirely obliterated. Thoracic tuberosities feeble...........	2
1–Rostrum without transverse impression. Median groove attaining the occiput.............................	**vittatus.**
Rostrum with feeble transverse impression. Median groove attaining the front......................	**tuberosus.**
Rostrum with very distinct impression. Median groove rostral only..	**latirostris.**
2–Elytra produced at base, humeri very oblique......	**sulcirostris.**
Elytra truncate at base, humeri feebly prominent	**porosus.**

O. vittatus Say, (*Liparus*) Journ. Acad. iii, p. 316; Germ. Sch. Gen. Curc. i, p. 509; Lec. Proc. Acad. vi, p. 443; Lec., Col. Kansas, 1859, p. 18, pl. 1, fig. 13.

Rostrum trisulcate, lateral sulci extending from opposite the insertion of the antennæ to a point opposite the eye, deep, slightly arcuate above; median sulcus extending from the tip nearly to the occiput. Thorax nearly twice as wide as long, sides strongly divergent from apex and near base suddenly narrowed, median line distinctly impressed, surface deeply punctured and irregular. Elytra regularly or oblong oval, vaguely striate and with rows of moderate punctures, interspaces slightly convex, surface densely covered with cinereous scales, the sutural and alternate interspaces black. Body beneath and legs densely covered with whitish scales. Length .34–.52 inch; 9—13 mm.

This species may be at once distinguished by the sculpture of the head and the vittate elytra It varies greatly in form primarily from sexual differences.

Occurs in Kansas and New Mexico. Not rare

O. tuberosus Lec. Proc. Acad. vi, p. 443.

Rostrum trisulcate, sulci rather broad and shallow, median passing slightly on the front, lateral extending above the eyes, transverse impression at base of rostrum feeble. Thorax nearly twice as wide as long, constricted at apex and base, sides (tuberosities) slightly divergent and notched at middle, surface deeply punctured and very irregular. Elytra regularly oval with rows of large, deeply impressed punctures; surface densely covered with cinereous scales and maculate with black. Body beneath and legs densely covered with whitish scales, femora with black spots near the tip. Length .40–.50 inch; 10–12 mm.

This species occurs rather abundantly in Colorado and New Mexico.

O. latirostris Lec., Proc. Acad. vi, p. 443; *validus* ♀ Lec., Proc. Acad. vii, p. 225.

Rostrum deeply transversely impressed at base (front convex) trisulcate, lateral sulci moderately deep, median sulcus broad, shallow, neither extending beyond the transverse impression. Thorax nearly twice as wide as long, anteriorly moderately at base suddenly and strongly constricted, sides divergent from apex feebly notched at middle; surface deeply punctured and very irregular. Elytra regularly oval, feebly ♂ or not ♀ striate with moderately impressed punctures. Body beneath and legs densely covered with whitish scales. Length .44–.64 inch; 11–16 mm.

The elytra are densely covered with cinereous scales, and with small irregularly interspersed fuscous spots, but to a much less extent than in the preceding species. From both the preceding species the present differs in the convex front, the rather deep transverse impression of the base of the rostrum as well as the form of the grooves. The thorax does not differ greatly in form in the three species, but is much less collared in this than in *tuberosus*. The median line is impressed in some and obliterated in other specimens.

Occurs in Kansas, New Mexico and Utah.

O. sulcirostris Say, (*Liparus*) Journ. Acad. iii, 1824, p. 316; Gyll. Sch. Gen. Curc. i, p. 509; Lec., Proc. Acad. vi, p. 443; *ligatus* Lec., loc. cit

Rostrum deeply transversely impressed at base, median sulcus moderate, lateral sulci short. Front convex. Thorax one-third wider than long, at apex moderately, at base strongly constricted, sides divergent from apex moderately tuberose, thorax deeply punctured and irregular. Elytra oval, humeri oblique, surface not or only obsoletely striate and with rows of moderate punctures, intervals feebly conxex; surface densely covered with pale cinereous scales maculate with fuscous, sometimes entirely plumbeous. Body beneath and legs densely covered with white or plumbeous scales Length .32–.36 inch, 8–9 mm.

The color of the surface vestiture varies greatly. In some specimens it is entirely plumbeous, in many cinereous obsoletely fusco-maculate, while in *ligatus* (a ♀) the fuscous spots are confluent and the elytra subvittate. The deciduous mandibular pieces are of slender conical form, very feebly arcuate and not long.

Occurs in Kansas, Colorado and Utah.

O. porosus Lec., Proc. Acad., 1845, p. 225.

Rostrum moderately transversely impressed at base, above trisulcate, median sulcus broad and shallow, lateral sulci short and deep. Thorax not twice as wide as long, sides with feeble tuberosity moderately arcuate, base moderately constricted ; surface coarsely punctured and irregular, median line moderately impressed. Elytra oval, base truncate, humeri rectangular slightly broader than the thorax at base, with striæ of moderately large punctures, surface with plumbeous scales. Body beneath and legs covered with plumbeous scales. Length .36 inch ; 9 mm.

This species and the preceding have the tenth elytral stria entirely obliterated, and the tuberosities of the thorax feeble, in both of which characters they differ from all the species which precede.

One specimen collected by Maj. Webb while on the boundary survey between the United States and Mexico.

EUPAGODERES, n. g.

This genus contains those species, formerly placed in *Ophryastes*, without lateral thoracic tuberosities. The tarsi are more dilated, the joints proportionately shorter and the third more distinctly bilobed. The distal angles are not produced in a spiniform process, a character by no means constant, however, in Ophyrastes. In this genus the articular cavities of the hind tibiæ become internal and the tip of the tibia truncate, showing an oval scaly space. The transition from the double apical fringe, which is usual, to the truncate tip with the two rows of fimbriæ surrounding an oval space is in this genus so gradual, even with the limited number of species, that it seems to indicate the little value of the characters drawn by Lacordaire from "*corbeilles ouvertes*" and "*corbeilles caverneuses.*" The deciduous mandibular piece is similar to that of *Ophryastes*. As in the latter genus some species have the rostrum and vertex continuous, the greater number, however, have a sinuation at the base of the rostrum. *O. Sallei* Sch. from Mexico belongs here.

The following are our species :

1—Vertex flat, rostrum without basal impression.
  Rostrum sulcate, thorax finely punctured... .... **speciosus.**
  Rostrum sulcate, thorax coarsely and deeply punctured.. **sordidus.**
  Rostrum not sulcate, thorax coarsely and deeply punctured .... **decipiens.**
2—Vertex convex, rostrum with basal impression.
  Elytral striæ broad, punctures large and close.

Apex of hind tibiæ narrow, disc of thorax coarsely punctured.
  Rostrum with three sulci, elytra oblong......... **argentatus.**
  Rostrum with median sulcus only, elytra broadly oval.. **lucanus.**
Apex of hind tibiæ truncate with broad oval space.
  Thorax rather finely punctured..................... **desertus.**
Elytral striæ fine, punctures coarse, thorax very coarsely and deeply punctured .... **varius.**
Elytral striæ fine, punctures fine.
  Intervals unequal, elytra vittate....................... **geminatus.**
  Intervals equal, elytra uncolorous..................... **plumbeus.**

In the species belonging to the first group the median sulcus of the rostrum extends on the front. In the second group the sulcus is rostral and extends to the transverse impression only.

E. speciosus Lec. (*Ophryastes*) Proc. Acad. vi, p. 444.

Form oblong, vertex flat. Rostrum without transverse basal impression, trisulcate, median sulcus extending from the tip to the front, terminating in a small fovea, lateral sulci on the sides of the rostrum, deep and angulated; surface sparsely punctured, densely scaly with white, middle and sides plumbeous. Thorax broader than long, sides rather strongly arcuate, apex and base with deeply impressed line at the sides, median line finely impressed; surface rather finely punctured, even, covered with dark plumbeous scales; on each side of middle an irregular white vitta. Elytra oblong oval, finely striate, striæ serrately punctured, intervals flat, unequal, surface densely covered with dark plumbeous scales, the narrower intervals and sides white. Body beneath and legs white. Length .74 inch; 19 mm.

One of the most conspicuous Rhynchophora in our fauna. The tenth elytral stria is composed of a few punctures close to the margin. The cotyloid cavities of the hind tibiæ are feebly cavernous and scaly.

Occurs in north-western Texas.

E. decipiens Lec. (*Ophryastes*) Proc. Acad. vi, p. 445.

Form oblong. Vertex not more convex. Rostrum without basal impression, median sulcus replaced by an obsolete fovea, lateral sulci very short; surface sparsely punctured, densely covered with whitish scales. Thorax not broader than long, sides strongly arcuate, apex and base truncate, surface deeply perforato-punctate, not uneven. Elytra oblong oval, finely striate, striæ with rather distant punctures, intervals equal, flat, surface densely covered with dark cinereous scales. Body beneath and legs white. Length .28–.44 inch; 7–11 mm.

Posterior cotyloid cavities strongly cavernous. This species may be easily known by the sculpture of the rostrum.

Occurs in Texas, New Mexico and Arizona.

E. sordidus Lec. (*Ophryastes*) Proc. Acad. vi, p. 445.

Form oblong oval. Rostrum trisulcate, median sulcus attaining the base of the rostrum, lateral sulci deep and straight, no transverse basal impression. Thorax slightly broader than long, sides moderately arcuate, base and apex truncate, surface sparsely punctured and slightly uneven. Elytra oval, striæ replaced by rows of moderate punctures, intervals equal, surface densely covered with cinereous scales and obsoletely maculate. Body beneath and legs nearly white. Length .36 inch; 9 mm.

This species resembles the preceding but is less elongate, the elytra wider at base, and the rostrum differently sculptured. Some specimens are maculate nearly as in *Oph. tuberosus.* The posterior cotyloid cavities are distinctly cavernous.

Occurs in Kansas and New Mexico.

E. argentatus Lec. (*Ophryastes*) Proc. Acad. vi, p. 444.

Form oblong, surface covered with pearly white scales, vertex convex. Rostrum with distinct basal impression, above trisulcate, median sulcus fine and long, lateral sulci deeper, shorter and arcuate; surface sparsely punctured. Thorax broader than long, sides arcuate, base and apex truncate, median line distinct, surface deeply perforato-punctate. Elytra oval, slightly oblong, with broad shallow striæ with large closely placed punctures; intervals slightly convex. Body beneath and legs silvery white. Length .60 inch; 15 mm.

The cotyloid cavities of hind tibiæ are scarcely at all cavernous. This is the third species in size of the genus and may readily be known by the characters given in the table.

Occurs in the desert regions of south-eastern California.

E. lucanus, n. sp.

Form oblong, moderately robust. Head and rostrum as long as the thorax. Rostrum with distinct transverse impression at base, and with fine median line only, surface punctured covered with intermixed cinereous and fuscous scales. Thorax nearly spherical, truncate at apex and base, slightly wider than long, median line broad but shallow, surface coarsely punctured covered with cinereous and fuscous scales with a broad, darker line on each side. Elytra oval, slightly longer than twice the thorax, with rather broad but very shallow striæ with coarse distant punctures, intervals slightly convex, surface with dark cinereous scales irregularly marmorate with fuscous. Body beneath and legs covered with cinereous scales. Length .28 inch; 7 mm.

The cotyloid cavities of the hind tibiæ are feebly cavernous and the oval space at tip is very narrow and glabrous.

One specimen from Cape San Lucas, Peninsula of California.

E. desertus, n. sp.

Form oblong, moderately robust, surface densely covered with silvery white scales. Rostrum with rather deep transverse impression at base, median sulcus shallow, indistinct, lateral sulci moderate, not deep, surface sparsely punctured. Thorax slightly wider than long, narrower in front, sides feebly arcuate from apex to base, behind the apex a transverse impression moderately coarsely punctured, at sides near middle a feeble impression, median line finely impressed; disc very sparsely and comparatively finely punctured, at sides slightly rugulose and more coarsely punctured. Elytra oblong oval, three times as long as the thorax, one and a-half times as long as wide, striæ broad and shallow, punctures coarse and serrate, intervals feebly convex. Body beneath and legs densely covered with whitish scales. Length .88 inch; 22 mm.

Posterior cotyloid cavities strongly cavernous, tip of tibiæ truncate with broad oval scaly space. This species is the largest of the genus.

One specimen found dead at Carisa Creek on the borders of the Colorado Desert of California.

E. varius Lec. (*Ophryastes*) Proc. Acad. vi, p. 444.

Form oblong. Rostrum transversely impressed at base, median sulcus feeble, lateral sulci deep but short and arcuate, surface sparsely punctured covered with silvery white scales. Thorax cylindrical, sides moderately arcuate, apex and base truncate, median line finely impressed, disc coarsely and rather closely punctured, surface covered with silvery white scales with a median and lateral plumbeous stripe. Elytra oboval, broadest behind the middle, finely striate and with coarse punctures not closely placed, surface with silvery white scales irregularly marmorate with plumbeous spots sometimes forming two vittæ. Body beneath and legs silvery white. Length .30–.44 inch; 7.5–11 mm.

The cotyloid cavities of the hind tibiæ are moderately cavernous, the space at the tip very narrowly oval and scaly. This species in form and color resembles *decipiens*, but may be known by the form of the rostrum.

Occurs in the desert regions of California and Arizona.

E. geminatus, n. sp.

Form oblong oval, moderately robust. Rostrum transversely impressed at base, above trisulcate, median sulcus finely impressed, lateral sulci short but deep, surface sparsely punctured, covered with whitish scales, a plumbeous space in front of each eye. Thorax broadly oval, wider than long, widest at base, sides strongly arcuate, median line rather deeply impressed, disc coarsely punctured, surface densely clothed with whitish scales with a broad plumbeous stripe on each side. Elytra regularly oval, three times as long as thorax and a third longer than wide, finely striate, striæ obsoletely punctured, intervals flat, unequal; surface densely covered with white scales, striæ narrowly black, narrow intervals slightly darker in color than the others. Body beneath and legs white. Length .30–.50 inch; 7.5–12.5 mm.

The posterior cotyloid cavities are strongly cavernous and the tip of the tibiæ narrowly oval, the space scaly. A very distinct and striking species.

Not rare in Owen's Valley, California.

E. plumbeus, n. sp.

Oval moderately robust, surface densely covered with cinereous or plumbeous scales. Head and rostrum as in *geminatus*, scales unicolorous. Thorax more than a-half broader than long, apex slightly narrower, sides strongly arcuate, disc coarsely but sparsely punctured surface with plumbeous scales, a darker vitta at the sides. Elytra broadly oval moderately inflated, finely striate, striæ indistinctly punctured, intervals equal, flat, surface densely covered with cinereous or plumbeous scales. Body beneath as above. Length .24–.36 inch ; 6–9 mm.

Cotyloid cavities of hind tibiæ moderately cavernous, tip of tibiæ with narrow oval scaly space. This species is of more robust facies than any other of the genus and may be known by the characters given in the table.

Not rare in Owen's Valley, California.

Group II. **Rhigopses.**

Rostrum quadrangular, broader in front, deeply sulcate above. Eyes narrow, acute beneath. Tarsi not dilated, beneath spinulose, third joint emarginate but not broader than the second. Corbels of hind tibiæ feebly cavernous. Posterior coxæ very widely distant. Intercoxal process broad, truncate, second abdominal segment much longer than the two following united, separated from the first by a strongly arcuate suture. Metasternal side pieces connate with the metasternum without evidence of sutures. Seventh joint of the funicle of the antennæ very close to the club.

The form and vestiture of the tarsi separate this group from the Strangaliodes and the structure of the abdomen from the Ophryastes. The rostrum and the scrobes are not unlike those of Ophryastes.

One genus occurs in our fauna.

RHIGOPSIS Lec.

Rhigopsis Lec. American Naturalist, 1874, p. 459.

Rostrum quadrangular, slightly longer than the head, dilated at tip and obliquely truncate above, upper surface deeply trisulcate, tip feebly emarginate. Mentum slightly retracted. Scrobes deep, well-defined, slightly arcuate in front, directed toward the lower border of the eye. Eyes narrow, acute beneath. Antennæ moderate, scaly, scape gradually stouter attaining the margin of the eye ; funicle 7-jointed, first two joints longer, stouter and nearly equal, 3–7 short, gradually broader, club oval, indistinctly articulated. Ocular lobes prominent. Scutellum indistinct. Elytra oval, feebly conjointly emarginate, humeri prominent, tuberculate. Metasternal side pieces connate with the body without suture. Hind coxæ very widely distant, intercoxal process broad, truncate. Second segment of abdomen longer than the two following united, separated from the first by a strongly arcuate suture. Tibiæ not mucronate at tip, corbels of hind tibiæ feebly cavernous. Tarsi spinous beneath third joint feebly emarginate, not wider than the preceding. Claws moderate, free. Body densely covered with scales, almost entirely obscured by exudation coating.

The tarsi of this genus although narrow are by no means of the *Byrsopide* type and this character appears to be of minor importance in classification in the present tribe, as two other genera already mentioned have the third joint feebly emarginate and not wider than the third.

Rh. effracta Lec. Amer. Nat., 1874, p. 459.

Form oval, color piceous densely covered with cupreous scales almost entirely obscured by a dark brown exudation. Head and rostrum as long as the thorax. Rostrum above trisulcate, tip obliquely truncate, front slightly concave and with a hood-like tubercle over each eye. Thorax broader than long, sides at anterior third more rapidly narrowing, posterior two-thirds feebly converging to the base, surface tuberculate and very irregular. Elytra oval, disc slightly flattened, humeri slightly oblique and with moderately large tubercle, from which a ridge or costa arises forming the lateral margin; disc bicostate, the outer terminating in a tubercle at the sides of the declivity, intervals with large foveæ separated by smaller ridges uniting the costæ; tip of elytra with smaller tubercle on each side. Body beneath scaly obscured with exudation and with short scale-like hairs. Legs dark brown, sparsely scaly and with fine scale-like hairs. Length .20–.26; 5–6.5 mm.

The appearance of this insect is that of a miniature *Rhigus*, or of some *Leptops*. Its affinities appear to be rather with *Ophryastes* than with any other genus.

Occurs in California feeding on the Yucca.

Group III. **Strangaliodes.**

The group as made up in the following table is not precisely that intended by Lacordaire. There are without doubt several genera which should be placed in his *Eremnides*, but with the exception of *Phyxelis* I can find no genus presenting such marked differences in the form of the scrobes as to render it possible to draw the line with any degree of accuracy between those genera in which the scrobes are strictly lateral and those with the scrobes arcuate and directed inferiorly.

The arrangement of the genera in the following table exhibits a gradual transition in the form and length of the rostrum, from *Dichoxenus* which approaches most nearly *Ophryastes* in this respect as well as in the structure of the scrobes and abdomen, to *Phymatinus* with a long rostrum almost entirely lateral scrobes and normal abdomen. *Cimbocera* by its narrower tarsi and the structure of the antennæ approaches *Ophryastes* in another direction. *Melamomphus* resembles almost precisely *Amomphus* in form.

I have not been able to obtain any characters from the form of the corbels of the hind tibiæ, but have been compelled to group seven genera by a character almost as feeble, the presence or absence of mucro at the tip of the hind tibiæ. Our genera exhibit such a similarity of structure that it is almost impossible to define their limits and with the addition of new material generic definition will be reduced to a work of extreme difficulty.

The following table is the result of a study in which it has been my endeavor to develop a serial arrangement exhibiting,

First, a gradual transition in the form of the rostrum, from the more robust to the elongate.

Second, the tendency of the scrobes to change from the strongly arcuate to the nearly straight and shallow form.

Third, the structure of the abdomen, with the three segments nearly equal (as in *Ophryastes*), to those with the abdomen of normal structure.

First suture of abdomen straight; second segment rarely as long as, never longer than the two following united; hind tibiæ usually mutic.
Scrobes deep, well defined, at least moderately arcuate, passing inferiorly.
Scrobes strongly arcuate, passing beneath at a distance from the eyes.................. **DICHOXENUS.**
Scrobes moderately arcuate, passing immediately beneath the eye................. **ANAMETIS.**
Scrobes evanescent posteriorly, badly defined, nearly straight, directed toward the lower angle of the eye.
Metasternal side pieces rather wide, suture distinct.
Hind tibiæ distinctly mucronate; corbels cavernous.......................... **MELAMOMPHUS.**
Hind tibiæ not mucronate; corbels open... **DYSLOBUS.**
Metasternal side pieces indistinct, suture obliterated.
Hind tibiæ not mucronate; corbels open.. **PANSCOPUS.**
First suture of abdomen arcuate; second segment as long as, and frequently longer than the two following united.
Seventh joint of funicle distant from the club; third joint of tarsi broader than the second, tarsi densely pubescent beneath.
Hind tibiæ not mucronate.
Scrobes strongly arcuate, moderately deep; passing rapidly beneath at a distance from the eyes.
Support of deciduous piece of mandible not prominent.
Anterior tibiæ denticulate within; surface of body scaly without hairs; corbels of hind tibiæ open............. **ORIMODEMA.**
Anterior tibiæ not denticulate; surface scaly and hairy; corbels sub-cavernous.......................... **MIMETES.**

Support of deciduous piece prominent; anterior tibiæ not denticulate. Surface scaly and with erect hairs.

Corbels of hind tibiæ cavernous; humeri entirely obliterated.......... **DIAMIMUS.**

Corbels of hind tibiæ open; humeri rectangular........................ **PERITAXIA.**

Scrobes very feebly arcuate, evanescent posteriorly, directed toward the lower angle of the eye, and short.............. **THRICOMIGUS.**

Hind tibiæ distinctly, usually rather strongly mucronate. Rostrum longer and narrower than the head and more or less auriculate.

Front convex separated from the rostrum by a transverse impression; side pieces of metasternum distinct, suture entire.. **AMNESIA.**

Front flat, rostrum continuous on the same plane and usually flattened above; side pieces of metasternum indistinct, suture in great part obliterated.

Body above finely tuberculate, scales large **PHYMATINUS.**

Body not tuberculate, scales small and denser................ .... **NOCHELES.**

Seventh joint of funicle contiguous to the club, third joint of tarsi feebly emarginate, scarcely broader than the preceding. Tarsi sparsely setose beneath.................. **CIMBOCERA.**

DICHOXENUS n.g.

Rostrum larger and slightly narrower than the head, slightly transversely impressed at base, feebly convex above, sub-quadrangular, alæ very feebly prominent, tip emarginate and with a small smooth space. Scrobes lateral deep, well defined, arcuate, passing rapidly beneath the head at a distance in front of the eyes. Antennæ moderate, sub-apical; scape gradually clavate, scaly, scarcely passing the anterior border of the eyes; funicle 7-jointed, joints 1–2 sub-equal, the first stouter, 3–7 obconical gradually shorter, club elongate oval. Eyes oval, oblique. Thorax oval, broader than long, truncate at apex and base, ocular lobe broad and moderately prominent. Scutellum indistinct. Elytra oval, not wider at base than the thorax. Metasternal side pieces indistinct. Intercoxal process of abdomen broad, slightly arcuate in front. Second segment of abdomen shorter than the two following united, separated from the first by an absolutely straight suture. Anterior and middle tibiæ feebly mucronate, the former feebly denticulate within. Articular cavities (*corbels*) of hind tibiæ open. Tarsi normal, densely pubescent beneath. Claws moderate, free. Body scaly and with short erect setæ.

This genus should probably be referred to the group Leptopsides of Lacordaire by its rather quadrangular rostrum although the lateral grooves and carina are here entirely wanting. Whether the genus be placed in the above group or with the *Strangaliodides*, the form of the scrobes, the short scape and the rather short second segment with straight first suture characterize it as distinct from any genus there described.

D. setiger, n. sp.

Oblong oval, densely covered with moderately large, imbricated, cinereous scales, discolored brownish by an exudation, and with short erect setæ. Head and rostrum slightly longer than the thorax, densely covered with cinereous discolored scales, with erect slightly clavate setæ sparsely placed. Thorax oval, broader than long, slightly narrower in front, apex and base truncate, sides moderately arcuate, disc convex, rugulose, subgranulose at the sides, surface covered as the rostrum. Elytra oval, slightly attenuate at apex, base feebly emarginate, humeri obtuse, disc moderately convex, striate, striæ rather finely punctured, intervals slightly convex, densely scaly and with a single row of short erect setæ on each. Body beneath less densely clothed than above, scales slightly pearly, setæ very short and recumbent. Legs moderately densely scaly and sparsely setose.

Length .24 inch; 6 mm.

Occurs in Texas. Belfrage 747.

MELAMOMPHUS n. g.

Rostrum longer and narrower than the head, cylindrical at base, slightly broader at tip with the alæ moderately prominent, tip feebly emarginate and with a narrow smooth space. Mandibles moderately prominent, supports of deciduous pieces also slightly prominent. Mentum transversely oval, sub-mentum with short peduncle. Front convex, separated from rostrum by a slight sinuation. Scrobes short, slightly arcuate, moderately deep in front, rapidly evanescent posteriorly, directed slightly beneath the eye. Antennæ sub-terminal, moderate; scape gradually thicker to tip, passing slightly the middle of the eye, setose; funicle 7-jointed, joints 1–2 longer, the first longer than the second, 3–7 transverse, short, sub-perfoliate, and verticillate with moderately long setæ: club oval, pointed. Eyes transversely oval, pointed beneath. Thorax oval, broader than long, lobes moderate and with short fimbriæ. Scutellum small, triangular. Elytra oval, not wider at base than the thorax, feebly emarginate at base. Metasternum short, side pieces moderately wide, separated by an arcuate suture. Intercoxal process moderate. Second abdominal segment not longer than the two following united, first suture straight. Tibiæ mucronate, the anterior feebly denticulate within, articular surfaces of hind tibiæ cavernous. Tarsi normal. Body densely scaly and hairy.

M. niger, n. sp.

Form oblong oval, densely covered with brownish black scales and with moderately long black hairs. Head and rostrum longer than the thorax, densely scaly and sparsely hairy. Thorax transversely oval, truncate at base and apex, sides regularly arcuate, disc convex, densely tuberculate, each tubercle punctured at summit, surface sparsely hairy. Elytra oblong oval and with rows of moderately large punctures deeply impressed, not closely placed, intervals flat, densely scaly, each with two rows of moderately long erect black hairs. Body beneath black, not scaly, coarsely and deeply punctured. Legs piceo-rufous or black, sparsely scaly and hairy. Length .32 inch ; 8 mm.

Excepting its black color this species resembles very closely *Peritaxia hispida,* of the present tribe, in its general form and appearance, the generic characters are however very different.

Occurs in Nevada.

DYSLOBUS Lec.

Dyslobus (pars) Lec. Ann. Mag. Nat. Hist., 1869, p. 380.

Rostrum longer than the head and slightly narrower, slightly wider at base and apex than at middle, alæ very feebly divergent, base cylindrical, apex sub-quadrangular and feebly emarginate. Front convex separated from the rostrum by a feeble transverse impression. Scrobes deep in front, rapidly evanescent posteriorly, slightly arcuate and directed toward the middle of the eye. Eyes transverse oval, obtuse beneath. Antennæ moderate, scape feebly thicker to tip, attaining the hinder margin of the eye ; funicle 7-jointed, first joint slightly longer, 2-7 obconical and gradually shorter ; club elongate oval, pointed. Thorax oval, not wider than long, lobes broad but very short, fimbriate. Scutellum confined entirely to the peduncle. Elytra oblong oval, not wider than the thorax. Metasternum short, side pieces moderate, suture distinct. Intercoxal process quadrangular, arcuate at apex. Second segment shorter than the other two united, first suture very nearly straight. Anterior tibiæ mucronate, arcuate in both sexes, denticulate within, middle tibiæ straight, mucronate, hind tibiæ straight ♀ or suddenly arcuate near the tip and furnished with a brush of moderately long silken hairs ♂, not mucronate at tip. Articular cavities of hind tibiæ open. Tarsi normal. Body densely scaly and with very short hairs.

Having found it necessary to separate the species of *Dyslobus* to form two genera, I have chosen as the type the first species mentioned (*D. segnis*) especially as it is the only one in which the second abdominal segment is rather short, and the first suture straight. This genus must be placed near *Panscopus,* which it resembles somewhat in form but is rather more elongate.

D. segnis Lec. (*Otiorhynchus*) Pacif. R.R. Rep. App. I, p. 56, 1857

Form oblong, surface densely covered with pale brownish scales and very short hairs. Head and rostrum as long as the thorax, densely covered with brownish and cinereous scales. Thorax broadly oval, as wide as long and nearly as wide as the elytra at their widest part, apex and base truncate, sides regularly arcuate, disc feebly convex, densely covered with brownish scales with paler spaces near the sides. Elytra oblong oval, twice as long as wide, sides feebly arcuate, apex feebly attenuate, posteriorly suddenly declivous and sub-compressed, disc feebly convex, striate, striæ with coarse rather distantly placed punctures, intervals flat densely scaly and with two irregular rows of very short setæ on each. Body beneath not densely covered with pearly white scales and with very short hairs. Legs moderately densely scaly, scales brown with whitish patches irregularly interspersed. Length .36–.44 inch; 9–11 mm.

The sexual distinction is found in the rather sudden bending of the hind tibiæ of the male with a brush of moderately long silken hairs near the tip. Occurs in California and Oregon.

PANSCOPUS Sch.

Panscopus Schönh. Curc. vi, 2, p. 266.

Rostrum a little longer and narrower than the head, separated from the latter by a moderately strong arcuate depression, robust, rounded at base, tip rather strongly emarginate, above convex obtusely carinate. Front flat. Scrobes deep, well defined, rather strongly arcuate, directed toward but not attaining the lower angle of the eye. Antennæ moderate, scape clavate attaining the middle of the eyes; funicle 7-jointed, 1–2 longer, the first longer than the second, joints 3–7 obconical, gradually broader, club oval acute. Eyes transversely oval, obtusely pointed beneath. Thorax broader than long, sides regularly arcuate, lobes short but broad. Scutellum nearly invisible. Elytra oblong oval, not wider than the thorax, truncate at base. Metasternum short, side pieces indistinct, suture obliterated. Intercoxal process moderate, truncate in front. Second abdominal segment equal to the two following, separated from the first by a straight suture. Anterior tibiæ feebly denticulate within. Articular surfaces of hind tibiæ open. Tarsi normal. Body oblong, surface densely scaly, and with short setæ.

P. erinaceus Say (*Barynotus*), Curc. N. A. p. 12; Am. Ent. 1, p. 272; Sch. loc. cit.

Form oblong moderately robust, surface densely covered with brownish scales, with paler spots irregularly placed on the elytra and a lateral stripe on the thorax. Head and rostrum slightly longer than the thorax, densely scaly, scales distinctly cupreous. Thorax slightly broader than long, apex and base truncate, sides regularly and rather strongly arcuate, disc moderately convex, median line distinctly impressed, surface rugulose, densely scaly, scales indistinctly cupreous, at the sides a paler line. Elytra oblong oval, striate, striæ with moderately large distant punctures, intervals feebly convex with a single row of short setæ and densely covered with brownish scales, sometimes with a slight cupreous lustre and with small paler spots irregularly placed especially numerous near the apex. Body beneath and legs similarly covered with scales. Length .24–.32 inch; 6–8 mm.

Occurs from Canada to Pennsylvania.

The large majority of the specimens are uniformly covered with a brownish coating the result of an exudation and adhering argillaceous material. The above description has been made from a clean specimen.

ANAMETIS n. g.

Rostrum longer and narrower than the head, moderately robust, slightly broader in front, tip feebly emarginate with a small smooth space, limited behind by an elevated line. Scrobes moderately deep, well defined, arcuate and directed beneath the lower angle of the eye. Antennæ moderate, anterior, scape gradually clavate, attaining the middle of the eye; funicle 7-jointed, 1–2 elongate, equal, 3–7 obconical, the seventh free; club elongate, oval. Eyes transversely oval, obtuse beneath. Thorax transversely cylindrical, narrower in front, base and apex truncate, lobes short, with slight fimbriæ. Scutellum small triangular. Elytra oval, emarginate at base and very slightly wider than the thorax. Metasternum short, side pieces indistinct, suture obliterated. Intercoxal process moderate, arcuate in front, second segment of abdomen as long as the the two following united, separated from the first by a straight suture. Anterior and middle tibiæ mucronate at tip, the former denticulate within, hind tibiæ extremely feebly or not mucronate, the articular surfaces sub-cavernous. Tarsi normal. Surface densely scaly and with short setæ.

As in all the genera in this vicinity the front is convex and the rostrum at base transversely impressed.

A. grisea, n. sp.

Form oval, surface densely and uniformly covered with cinereous scales and short setæ. Head and rostrum as long as the thorax, densely scaly, scales slightly pearly. Rostrum feebly convex along the middle, rarely with a finely impressed longitudinal line on each side. Thorax wider than long, slightly narrower in front, disc moderately convex, surface densely scaly and sparsely setose. Elytra regularly oval, striate, striæ moderately punctured, intervals slightly convex, densely scaly and irregularly biseriately setulose. Body beneath and legs with similar vestiture, but less dense. Length .20–.28 inch; 5–7 mm.

This species resembles somewhat *Epicærus formidolosus* in form but is more elongate.

Occurs in Kansas, Dacota, Illinois and Georgia, and is common.

ORIMODEMA n. g.

Rostrum shorter but narrower than the head, cylindrical at base, sub-quadrangular at apex, with a transverse impression at some distance in front of the eyes, tip feebly emarginate, with narrow smooth space without elevated line. Supports of mandibular pieces not prominent. Scrobes deep, well defined, arcuate, passing rapidly inferiorly at a distance from the eyes. Antennæ moderate anterior, scape gradually clavate, scaly, attaining the middle of the eye; funicle 7-jointed, 1–2 large, equal, 3–7 obconical gradually shorter, seventh not broader and free; club oval, acute. Eyes transversely oval, pointed beneath. Thorax cylindrical, truncate at apex and base, sides very feebly arcuate. lobes prominent and fimbriate. Scutellum short transverse. Elytra elongate oval, gradually attenuate posteriorly. Metasternum short, side pieces indistinct, suture obliterated. Intercoxal process moderate arcuate in front, second abdominal segment longer than the two following united, separated from the first by a suture strongly arcuate at middle. Anterior and middle tibiæ mucronate at tip, the former denticulate within. Articular surface of hind tibiæ open, the tibiæ not mucronate at tip. Tarsi normal, surface densely scaly and not pilose.

This genus appears from description to be allied to *Dasydema* and *Orimus*. The femora are sub-pedunculate, the anterior stouter. The scutellum is distinct, the rostrum short and stout, and the surface scaly without setæ. In these particulars it differs from one or other of these two genera, and agrees with them in having the corbels open.

O. protracta, n. sp.

Form elongate oval, surface densely covered with brownish scales with slight cupreous lustre, elytra irregularly variegated with paler patches. Head and rostrum as long as the thorax, densely scaly, scales brownish and paler intermixed. Head large. Thorax cylindrical, base and apex truncate, equal, not wider than long, sides feebly arcuate, disc regularly convex, surface densely covered with pale-brownish scales. Elytra elongate oval, regularly attenuate behind, base not wider than the thorax, humeri obliquely rounded, sides feebly arcuate, disc feebly convex, feebly striate, striæ with moderate, not closely placed punctures, intervals flat, densely covered with pale-brownish scales with distinct cupreous lustre, and with paler spaces irregularly placed. Under surface moderately densely scaly, scales paler than above. Tibiæ sparsely fimbriate. Length .36 inch; 9 mm.

Occurs in Colorado and New Mexico.

MIMETES Sch.

Mimetes Schönh. Mant. sec. Curc. p. 23.

Rostrum slightly longer and narrower than the head, sub-quadrangular, slightly dilated and feebly emarginate at tip, separated from the front by a distinct, arcuate impression. Sub-mentum with a distinct peduncle, not inflexed. Scrobes deep, well defined, rather suddenly arcuate and passing near the lower border of the eye. Eyes round, coarsely granulated, feebly prominent. Antennæ moderately long; scape gradually clavate, attaining nearly the middle of the eye; funicle 7-jointed, 1–2 longer, the first longer than the second, 5–7 obconical, gradually shorter; club oval, pointed. Thorax cylindrical, sides feebly arcuate, apex slightly narrower and with the base truncate. Scutellum small triangular. Elytra oblong oval, slightly acuminate posteriorly, base not wider than the thorax and broadly emarginate, humeri rounded. Metasternum moderate, side pieces narrow, suture distinct in its entire length. Intercoxal process broad, rounded in front; second segment of abdomen much longer than the two following united, separated from the first by very strongly arcuate suture. Tibiæ (except posterior) distinctly but feebly mucronate. Articular surfaces of hind tibiæ distinctly cavernous. Claws moderate, free.

It is not without doubt that I consider the genus before me identical with *Mimetes*. The thorax is provided, in well preserved specimens with the post-ocular thoracic fimbriæ characteristic of the *Tanymecides* of Lacordaire. These hairs are however very easily removable, and it is possible that Lacordaire may have had a specimen before him similar to one now at hand. The present species has been submitted to Mr. H. Jekel, who agrees with me in placing it near *Amomphus* and its allies. The mandibles have no prominent support for the deciduous piece. In addition to the characters given in the table, this genus has a much less robust rostrum and the frontal impression is between the eyes and not at a distance in front as in *Orimodema*.

M. setulosus Lac. Gen. Curc. vi, p. 40.

Form oblong oval, surface densely covered with cinereous scales, variegated in some specimens with white and pale cupreous. Head and rostrum longer than the thorax, densely punctured and scaly. Antennæ rufous, sparsely pubescent. Thorax, cylindrico-oval, slightly narrower and feebly constricted in front, sides moderately arcuate, base truncate, disc feebly convex, densely punctured and densely covered with cinereous scales. Elytra oblong oval, nearly twice as long as wide, sides moderately arcuate and feebly attenuate behind, base broadly emarginate ; disc feebly convex, finely striate, striæ not closely punctured, intervals at sides feebly convex and at apex slightly alternating, surface densely scaly, on each interval a row of short, distant, semi-erect setæ. Body beneath densely scaly and very sparsely hairy. Legs moderately densely scaly, tibiæ more distinctly pilose especially on the inner side. Length .22 inch ; 5.5 mm.

Occurs at San Diego and San Buenaventura, California.

M. seniculus, n. sp.

Form elongate oval, surface densely covered with intermixed and pale-brown scales very densely placed. Head and rostrum as long as the thorax, densely scaly and with fine short whitish hairs. Rostrum with feeble median impression in front and an angulate impression at base between the eyes. Thorax oval, longer than wide, sides moderately arcuate, a slight constriction at the sides behind the anterior margin, apex and base truncate, disc feebly convex densely scaly, scales pale-brownish, a whitish median line. Elytra oblong oval nearly twice as long as the thorax, and one-half wider at middle, moderately convex, densely scaly, scales pale-brown and cinereous irregularly clouded, surface faintly striate, striæ feebly punctured, intervals flat, with a single row of short whitish hairs. Body beneath similarly scaly, scales decidedly pearly and with more evident hairs, especially at the middle of the posterior portion of the first ventral segment ♂. Legs pale-brownish, similarly but more sparsely scaly Length .14 inch ; 3.5 mm.

One specimen California (Motschulsky) differs from the preceding species by its smaller size, more slender form and flat elytral interstices.

This species was sent by Motschulsky as *Sitones seniculus*, Mann., to Dr. LeConte; another type from the same source sent to Allard proved to belong to another entirely different species, of which mention will be made by Dr. LeConte in the proper place.

The original description by Mannerheim is here appended, so that a comparison of descriptions may be readily made.

"'Oblongus, subcylindricus, niger *cinereo-tomentosus* et setosus, fronte canaliculata, rostro excavato, thoraci *profunde rugose punctato*, lateribus vix rotundato, *elytris profunde punctato-striatis*, antennarum basi, tibiisque ferrugineis. Long. 1⅗ lin; latit. ½ lin.

DIAMIMUS n. g.

Rostrum longer and narrower than the head, slightly broader in front, cylindrical at base, separated from the head by a transverse impression, tip feebly emarginate and with very small smooth space. Scrobes deep, well defined arcuate, directed beneath at a distance from the eyes. Antennæ moderate, scape feebly clavate, attaining the middle of the eye; funicle 7-jointed, 1–2 larger, 3–7 obconical, gradually decreasing in length, the last distant from the club which is elongate oval, acute. Eyes broadly oval. Thorax cylindrical, sides feebly arcuate, lobes very short, fimbriate. Scutellum distinct. Elytral oblong oval, humeri obliterated. Metasternum short, side pieces indistinct suture obliterated. Intercoxal process moderate, truncate in front. Second segment longer than the two following, separated from the first by an arcuate suture. Anterior and middle tibiæ mucronate at tip, not denticulate within, hind tibiæ not mucronate, their corbels cavernous. Tarsi normal. Body oblong densely scaly, sparsely pilose.

D. subsericeus, n. sp.

Form oblong, surface moderately densely covered with cinereous scales slightly cupreous and with micaceous lustre and with erect hairs sparsely placed. Head and rostrum not longer than the thorax, moderately densely scaly, sparsely pilose. Thorax cylindrical, slightly wider than long, apex and base truncate, sides regularly and moderately arcuate, disc moderately convex, sparsely punctured, moderately densely scaly and sparsely pilose. Elytra oblong oval, sides feebly arcuate, humeri obsolete, surface moderately convex and with rows of moderate, not closely placed punctures, intervals flat, moderately densely scaly, each with a row of moderately long erect hairs. Body beheath less densely scaly and with very few hairs. Legs sparsely scaly, hairs longer. Surface color less the vestiture piceous. Length .18–.22 inch; 4.5–5.5 mm.

Occurs in New Mexico and Colorado.

PERITAXIA n. g.

This genus differs from the preceding by the following characters:

Scrobes more evanescent posterioriy, less arcuate and directed more inferiorly. Corbels of hind tibiæ open. Humeri rectangular.

In their form of vestiture the two genera agree. In both the supports of the mandibular pieces are moderately prominent and obliquely truncate at tip.

Amomphus (*Cottyi*) is also closely allied and differs especially in the wide metasternal side pieces with the suture distinct.

Two species occur in our fauna.

Ocular lobes distinct but feeble, surface covered with very dark piceous scales and short cinereous hair..	**rugicollis.**
Ocular lobes wanting but replaced by a decided fringe of stiff hairs, surface with cinereous scales and longer greyish hair.....................	**hispida.**

P. rugicollis, n. sp.

Form oblong, color piceous, surface sparsely covered with inconspicuous scales, not differing in color from that of the surface, and with short brownish hairs. Head and rostrum slightly longer than the thorax, sparsely scaly and with few hairs. Thorax transversely oval, apex and base truncate, sides moderately arcuate, disc moderately convex, granulato-rugulose, median line obsoletely impressed, surface sparsely scaly and pilose. Elytra oblong oval, base feebly emarginate, humeri sub-rectangular, disc moderately convex, feebly striate and with coarse punctures moderately closely placed, intervals flat, sparcely scaly, bi-seriately pilose. Body beneath and legs indistinctly scaly and with short greyish hairs. Length .30 inch ; 7.5 mm.

Occurs in Colorado and New Mexico.

This species bears considerable resemblance superficially to *Melamomphus niger* of the present tribe.

P. hispida, n. sp.

Oblong oval, piceous, surface scaly and hispid. Head and rostrum as long as the thorax, moderately densely punctured, not densely scaly and with numerous, moderately long, erect, yellowish hairs. Thorax oval, slightly narrower in front, as broad as long, sides moderately, base feebly arcuate, disc moderately convex, surface densely and rather coarsely punctured and rugulose, moderately densely scaly and hairy. Elytra oblong oval, nearly three times as long as the thorax, moderately convex, surface deeply striate, striæ with large but not closely placed punctures, intervals flat, finely punctured, sparsely scaly and hairy. Body beneath piceous, sparsely scaly and with shorter hairs than the upper surface. Legs piceous, sparsely scaly and hairy, the tibiæ with longer hairs. Length .36 inch ; 9 mm.

The scales covering the surface rather sparsely are of a dirty-white color with a slight tinge of cupreous. In form this insect resembles *Amomphus Cottyi* but with the sides of thorax and elytra more arcuate.

Occurs abundantly in Colorado.

THRICOMIGUS n. g.

Rostrum slightly longer and narrower than the head, feebly arcuate, very slightly dilated at tip, base cylindrical and with transverse impression, tip very feebly emarginate. Scrobes moderately deep in front, rapidly evanescent posteriorly, very feebly arcuate and directed toward the lower portion of the eye. Antennæ moderate, scape gradually clavate, slightly passing the middle of the eye; funicle 7-jointed, joints 1–2 longer, the first longer than second, 3-7 moniliform; club oval, pointed. Eyes broadly oval. Thorax oval, slightly broader than long, apex and base truncate, sides moderately arcuate, lobes very short, fimbriate. Scutellum short, broad. Elytra regularly oval. Metasternum short, side pieces moderate, suture distinct. Intercoxal process moderate, truncate in front, second segment longer than the two following united, suture distinctly arcuate. Anterior tibiæ denticulate within, this and the middle tibiæ mucronate at tip. Articular surfaces of hind tibiæ sub-cavernous, tip not mucronate. Tarsi normal. Body above densely scaly and pilose.

The unique species composing this genus resembles a large *Phyxelis glomerosus* but is relatively more elongate. The alæ of the rostrum are slightly prominent, and the scrobes are rather better visible from above than beneath, but are not superior as in *Phyxelis*, and do not differ notably from those of the genera placed by Lacordaire in the present tribe.

T. luteus, n. sp.

Form oval, surface densely covered with pale ochreous scales, in some specimens slightly cupreous, and with short erect hairs. Head and rostrum as long as the thorax, moderately densely scaly, scales at the sides paler, and with erect, short, brownish hairs sparsely placed. Thorax slightly broader than long, slightly narrower at apex, sides moderately and regularly arcuate, apex and base truncate, disc moderately convex, densely scaly, sparsely hairy. Elytra oval, humeri broadly rounded, disc moderately convex, striate, striæ with moderate, not densely placed punctures, intervals flat densely scaly, scales paler at the sides, each interval with two rather irregular rows of erect, brownish, short setæ. Body beneath less densely scaly than above. Legs sparsely scaly and with longer hairs than the body. Length .28–.30 inch; 7–7.5 mm.

Occurs in Bitter Root Valley and in Colorado.

AMNESIA n. g.

Rostrum slightly longer and narrower than the head, cylindrical at base and with transverse impression, apex slightly broader, alæ very feebly prominent, tip feebly emarginate. Scrobes moderately deep and well defined anteriorly, feebly arcuate, rapidly evanescent and feebly limited posteriorly, directed toward the lower portion of the eye. Antennæ moderate, sub-apical, scape gradually clavate, attaining the middle or posterior border of the eye, funicle 7-jointed, first two longer and sub-equal, 3–7 shorter, usually obconical, sometimes longitudinally ovate, club oval, pointed. Thorax oval, usually broader than long, sides moderately arcuate, apex and base truncate, lobes very short and slightly fimbriate. Scutellum small, scarcely entering between the elytra. Elytra oval or oblong oval, base not broader than the thorax, feebly emarginate, humeri feebly rectangular or entirely obliterated. Metasternum short, side pieces moderately wide, suture distinct in its entire length. Intercoxal process moderate truncate in front. Tibiæ mucronate at tip, articular surfaces of hind tibiæ feebly cavernous. Tarsi normal. Body above densely scaly and with extremely short black setæ in some species, and moderately long hairs in others.

This genus is a part of that included by Dr. Leconte in *Dyslobus*, the generic description of which appears to have been made from *D. segnis* and *A. granicollis* of the present genus. I have retained the name *Dyslobus* for the species with the first abdominal suture straight as this character is the most important and striking in the description. Regarding the position the genus should occupy in the groups indicated by Lacordaire, I am in some doubt. The scrobes are lateral, feebly arcuate and directed toward the lower front of the eye. They do not become rapidly inferior as in several genera already noted, and are but slightly less arcuate and less defined than in *Panscopus*.

For the present, I prefer to retain *Amnesia* in the present group as one of the leads toward the *Phytoscaphi* to which the next genus probably belongs, *Nocheles* in turn being a lead toward the *Eremnini*.

I consider (*Dyslobus*) granicollis Lec. the type of the genus.

The following table will make our species easily known :

Hairs of the surface, especially on the elytra, very short and inconspicuous. Humeri rectangular, anterior tibiæ moderately denticulate.	
Body beneath rather sparsely and not coarsely punctured..	**granicollis.**
Body beneath with coarse deep punctures, denser on the intercoxal process and last ventral segment..	**decorata.**
Hairs of surface very distinct, usually rather long.	
Humeri rectangular, anterior tibiæ moderately denticulate.	
Surface of thorax even, not granulate...............	**ursina.**
Surface of thorax granulate, each granule punctured..	**rauca.**
Humeri obliterated, anterior tibiæ feebly denticulate, surface of thorax with punctured granules.	
Elytra oval, wider at middle than the thorax, and not twice as long as wide.	
Thorax not narrowed in front, granules inconspicuous, surface densely scaly ; elytra with cinereous scales....................................	**alternata.**

Thorax not narrowed in front, granules of moderate size and not very approximate, surface sparsely scaly; elytra with brownish scales.. **sordida.**

Thorax distinctly narrowed in front, granules small and very indistinct, surface sparsely scaly; elytra with brownish scales............ **decidua.**

Elytra oblong, not or scarcely wider at middle than the thorax, and twice as long as wide .... **elongata.**

A. granicollis Lec. (*Dyslobus*) Ann. Mag. Nat. Hist. 1869, p. 380.

Form oval, above moderately densely covered with pale-brownish scales, variegated with paler and darker spots, and with extremely short and inconspicuous black setæ. Head and rostrum as long as the thorax, moderately densely punctured, scales cupreous, rostrum with a feeble carina terminating in a slight frontal puncture. Thorax slightly broader than long, apex and base truncate and nearly equal, sides moderately arcuate, lobes very feeble, disc moderately convex, indistinctly granulate, granules punctured at summit, surface moderately densely scaly and with very short setæ, scales pale-brownish with slight cupreous lustre, paler at the sides. Elytra oval, conjointly emarginate at base, humeri rectangular, disc moderately convex, apex rather suddenly declivous, indistinctly striate, striæ with moderately large, not closely placed punctures; intervals alternately more convex especially toward the declivity, surface densely scaly, scales pale-brownish, variegated with darker and paler spots, especially on the more convex intervals, each interval with numerous short, black setæ, very inconspicuous. Body beneath very sparsely scaly at the sides, and with scale-like hairs at middle, surface rather sparsely punctured. Legs sparsely scaly and with short hairs. Length .38–.40 inch; 9.5–10 mm.

Occurs in Vancouver and Oregon.

This species has somewhat the facies of *Tyloderes chrysops.*

A. decorata Lec. (*Dyslobus*) Ann. Mag. Nat. Hist. 1869, p. 381.

Form oblong oval, surface densely covered with cinereous scales, variegated with brownish and cupreous spaces. Head and rostrum nearly as long as the thorax, surface rather coarsely punctured, moderately densely scaly, scales cupreous; rostrum above feebly subcarinate. Thorax oval, slightly broader than long, apex and base truncate, the apex slightly narrower, sides rather strongly arcuate especially at posterior third, lobes very feeble; disc very feebly convex, sub-rugosely punctate and feebly granulate, sparsely scaly, scales silvery and cupreous and with extremely short inconspicuous setæ. Elytra oblong oval, conjointly emarginate at base, humeri rectangular, sides moderately arcuate, disc moderately convex, apex rather suddenly declivous, surface striate, striæ with moderate, rather closely placed punctures, intervals slightly convex, and alternately slightly more convex near the declivity, densely scaly, scales cinereous or pale-brownish, variegated with cupreous and darker scales. Body beneath piceous, with sparsely placed scale-like hairs, intercoxal process and last ventral segment densely cribrate punctate. Legs sparsely scaly and pubescent. Length .26 inch; 6.5 mm.

Although very different in appearance from the preceding species, there is some difficulty in finding characters expressible in words to separate the two. The thorax of the present species is relatively much broader and at its widest part but little narrower than the elytra. The alternation of elevation of the intervals is very little marked on the disc and is but slightly more evident near the declivity.

A variety ? occurs in Oregon with intervals nearly flat and similar.

Occurs in Oregon and Vancouver.

A. ursina, n. sp.

Form oblong oval, surface densely covered with brownish scales and with rather long, pale-brown erect hairs. Head and rostrum as long as the thorax, rostrum not subcarinate above, surface punctured, densely covered with brownish scales becoming cinereous at the sides and beneath and with moderately long erect hairs. Thorax not wider than long, apex and base equal and truncate, sides evenly arcuate, lobes very short; disc moderately convex, not granulate, finely punctured, densely covered with brownish scales with slightly pearly lustre, and paler at the sides and with long erect hairs. Elytra oval, very slightly wider at middle than the thorax, base feebly conjointly emarginate, humeri rectangular, sides moderately arcuate, apex gradually declivous, disc moderately convex, striate, striæ with rather coarse punctures closely placed, intervals slightly convex, densely covered with brownish scales and with two rows of closely placed and rather long, pale brownish hairs. Body beneath and legs sparsely scaly, scales slightly silvery, and with moderately long hairs. Abdomen sparsely punctured. Length .28 inch; 7 mm.

One specimen ♂, Oregon.

A. rauca, n. sp.

Oblong, surface densely covered with brownish scales, and with moderately long, pale-brownish hairs. Head and rostrum as long as the thorax, densely cribrate punctate, rostrum sub-carinate, surface sparsely scaly and hairy. Thorax nearly globose, slightly wider than long, apex truncate, base slightly arcuate, sides strongly arcuate, lobes very feeble, disc convex, moderately densely granulate, granules punctured at summit, surface sparsely scaly and hairy. Elytra oblong, scarcely wider at middle than the thorax, base feebly emarginate, humeri rectangular, disc moderately convex, obsoletely broadly striate, striæ with large, deeply impressed, rather closely placed punctures, intervals flat, densely covered with brownish scales and moderate hairs placed in two rows on each interval. Body beneath densely and coarsely punctured and with very few short hairs Legs sparsely scaly and hairy, hairs longer than on the body. Length .22 inch; 5.5 mm.

Differs from the preceding in sculpture and by the much shorter hairs of the upper surface.

Two specimens, San Francisco, Cal.

A. alternata, n. sp.

Oblong oval, surface densely covered with brownish cinereous hairs, the alternate intervals of the elytra paler. Head and rostrum as long as the thorax, sparsely punctured and with erect yellowish hairs, surface densely covered with cinereous scales, brownish at the sides ; rostrum with a short median impression between the insertions of the antennæ. Thorax cylindrical, very slightly broader than long, sides moderately arcuate, surface densely covered with cinereous scales, slightly clouded at middle, with few erect hairs ; when deprived of scales the surface consists of flattened punctured granules, moderately densely placed. Elytra oblong oval, one-third longer than wide, humeri obtusely rounded, surface striate, striæ with punctures of moderate size, not closely placed, intervals flat, densely covered with cinereous scales, each alternate interval darker at basal half and irregularly clouded near the apex, each interval with two very irregular rows of erect hairs. Body beneath not very densely covered with cinereous scales and with few hairs. Legs with densely placed scales and sparsely placed hairs longer than those of the surface. Length .26 inch ; 6.5 mm.

This species from its densely scaly surface has a greater superficial resemblance with *decorata* than the species near which it is placed, but from its having rather conspicuous erect hairs on the entire upper surface it must be placed here.

Two specimens, Montana.

A. sordida, n. sp.

Form oblong oval, resembling *granicollis*, surface densely covered with brownish scales, indistinctly variegated with brownish spots and with rather short hairs. Head and rostrum as long as the thorax, moderately densely and coarsely punctured, rostrum distinctly sub-carinate above, surface very sparsely scaly and hairy. Thorax nearly spherical with apex and base truncate, lobes extremely short, disc moderately convex, finely and not closely granulate, each granule punctured at summit, surface sparsely scaly and hairy. Elytra regularly oval, one-half broader at middle than the thorax, base feebly emarginate, humeri entirely obliterated, disc moderately convex, finely striate, striæ with elongate punctures, intervals flat, densely scaly and with two rows of pale-brownish hairs of moderate length. Body beneath moderately densely punctured, sparsely hairy. Legs with very few scales, sparsely hairy. Length .34 inch ; 8.5 mm.

The form of this species is very nearly that of *granicollis*, but with flat elytral intervals and without rectangular humeri.

One specimen, California (or Oregon).

A. decidua, n. sp.

Form oblong, surface moderately covered with pale-brownish, easily removeable scales and with brownish erect hairs. Head and rostrum slightly longer than the thorax, densely and coarsely punctured, sparsely scaly and hairy, scales at sides and tip cupreous, rostrum above, carinate. Thorax oval, wider than long, slightly narrower at apex than base, sides moderately arcuate, lobes feeble, apex at base truncate, disc moderately convex, granulato-rugulose, very sparsely scaly and hairy. Elytra elongate oval, sides very feebly arcuate, base feebly emarginate, humeri entirely obliterated, disc moderately convex, obsoletely striate, and with moderately coarse closely placed punctures, intervals slightly convex, moderately densely covered with easily removable scales, and two rows of irregularly placed erect brownish hairs. Body beneath moderately densely punctured, with few elongate cupreous scales and sparsely hairy. Legs sparsely scaly and hairy, hairs longer on the tibiæ and denser near the tip. Length .34 inch ; 8.5 mm.

Two specimens, Sauzalito, California.

A. elongata, n. sp.

Form rather slender, elongate, surface densely covered with brownish scales and hirsute. Head and rostrum slightly longer than the thorax, densely and coarsely punctured, sparsely scaly and hairy, rostrum above very feebly sub-carinate near the base. Thorax slightly broader than long, apex and base truncate, sides rather strongly arcuate, disc moderately convex, densely granulato-rugulose, sparsely scaly and hairy. Elytra scarcely longer at middle than the thorax, form oblong, base feebly emarginate, humeri entirely obliterated, disc moderately convex, feebly striate, striæ with elongate punctures, intervals nearly flat, moderately densely scaly, and with two rows of erect brownish hairs. Body beneath coarsely and densely cribrate punctate, surface sparsely hairy. Legs sparsely scaly and hairy. Length .26–.32 inch ; 6.5–8 mm.

This species is easily known by its elongate form.

Two specimens, California.

PHYMATINUS Lec.

Phymatinus Lec. Ann. Mag. Nat. Hist., 1869, p. 382.

Rostrum oblique, longer and somewhat narrower than the head not separated from the head by a transverse impression, cylindrical at base, dilated at apex, alæ moderately prominent, tip not emarginate. Scrobes deep in front, nearly straight, very rapidly evanescent posteriorly and badly defined, directed toward the lower margin of the eye. Antennæ long, scape rather slender, feebly thicker to tip, passing slightly the middle of the eye. funicle 7-jointed, somewhat longer than the scape, joints 1-2 longer and equal, 3–7 obconical, gradually shorter, club oval, pointed. Eyes broadly oval, feebly prominent. Thorax cylindrical, apex and base truncate, sides more arcuate in front of middle, lobes feeble. Scutellum very indistinct. Elytra oval, very suddenly declivous and slightly inflexed posteriorly, base conjointly emarginate, humeri obtuse. Metasternum short, side pieces indistinct, suture entirely obliterated. Intercoxal process broad, truncate, second segment longer than the two following united, first suture strongly arcuate at middle. Tibiæ mucronate at tip, the anterior feebly denticulate within, articular surface of hind tibiæ cavernous, tarsi normal, (third joint broadly bilobed) densely pubescent beneath. Surface densely scaly and with small granules.

This genus, as suggested by Dr. LeConte, should probably be referred to Lacordaire's group *Phytoscaphides*, but if so, I feel entirely unwilling to separate that group from the present, the scrobes of the genera here included showing a very gradual transition in form.

P. gemmatus Lec. (*Tyloderes*) Pacif. R.R. Rep. App. i, p. 56.

Elongate oval, black, surface densely covered with cinereous scales, with cupreous and pearly lustre at the sides, disc of thorax and elytra slightly brownish. Head and rostrum longer than the thorax, punctured and moderately densely scaly, sparsely setulose, rostrum with finely elevated median line terminating in a slight impression. Scape with scale-like hairs. Thorax cylindrical, as broad as long, apex and base truncate, sides arcuate, more strongly in front of middle, disc moderately convex and with median sulcus, surface with moderately large granules, each punctured and with a short stout seta, median line and narrow space each side not granulate, intergranular spaces densely scaly, scales darker on the disc, pearly and cupreous at the sides. Elytra regularly oval, very suddenly declivous posteriorly, sutural region more prominent at declivity, disc feebly convex, striæ obsolete, and with rows of indistinct punctures, each alternate interval with two indistinct rows of moderate granules, each punctured and bearing a short, stout, curved, black seta, interspaces densely scaly, scales darker on the disc, pearly and cupreous at the sides. Body beneath and legs moderately densely scaly, sparsely setulose, scales pearly and cupreous. Length .32-.40 inch; 8-10 mm.

This species has a marked resemblance to *Tyloderes chrysops* in size, sculpture and general aspect.

Occurs in California and Oregon.

NOCHELES n. g.

Nocheles Lec. mss. Amer. Nat. 1874, p. 453, without characters.

Rostrum oblique, longer and narrower than the head, without transverse basal impression, above flattened, base quadrangular, apex dilated, alæ moderately prominent, tip feebly emarginate and with small smooth space. Scrobes very feebly arcuate, deep in front, very rapidly evanescent posteriorly, directed toward the lower margin of the eye. Antennæ moderate, scape very slightly passing the anterior margin of the eye, feebly stouter at tip; funicle 7-jointed, joints 1-2 longer and equal, 3-7 gradually shorter, obconical; club oval. Eyes oval. Thorax oval, broader than long, apex and base truncate, lobes moderate. Scutellum very small. Elytra oval, base very feebly emarginate, apex declivous. Metasternum short, side pieces indistinct, sutures entirely obliterated, intercoxal process moderate, truncate, second segment as long as the two following united, first suture arcuate. Tibiæ mucronate at tip, articular surfaces of hind tibiæ cavernous, tarsi normal. Surface densely scaly and with very short setæ.

Two species compose this genus.

Intervals of elytra convex, alternately more elevated ; humeri not prominent.................................. **torpidus.**
Intervals convex, equal ; humeri obtusely prominent......... **cinereus.**

N. torpidus Lec. (*Hylobius*) Pacif. R.R. Rep. App. 1, p. 55.

Elongate oval, surface densely covered with cinereous scales and with very short sub-erect setæ. Head and rostrum longer than the thorax, sparsely punctured, densely pubescent, and with very few short sub-erect scale-like hairs. Rostrum flat above, tip with small triangular smooth space, a fine median line near the tip. Thorax slightly broader than long, sides in front rather strongly arcuate, then gradually narrowed to base, disc moderately convex with a rather broad median channel deeper in front, surface sub-granular and very densely scaly and with few sub-erect scale-like hairs. Elytra oblong oval, slightly wider at base than the thorax, humeri rounded, disc moderately convex, feebly striate, striæ with moderate, rather closely placed, round punctures, each filled with a large scale, intervals convex, the sutural 2–4–6–8 more elevated, surface densely scaly, each interval with one row of short scale-like sub-erect hairs. Body beneath and legs very densely covered with scales similar to those of the upper surface. Length .26–.28 inch ; 6.5–7 mm.

Old specimens of this species are frequently brownish. One female in the cabinet of Dr. LeConte has one of the short abdominal segments absent.

Not rare in Oregon.

N. æqualis, n. sp.

Form oblong oval, surface densely covered with cinereous scales, and with short erect setæ. Head and rostrum slightly longer than the thorax. densely scaly, sparsely setose. Rostrum slightly rounded above, at tip with very small smooth space and without median line. Thorax slightly broader than long, sides, moderately arcuate, disc feebly convex, median line feebly impressed, surface granulato-rugulose, moderately densely scaly and sparsely setose. Elytra oval slightly broader than the thorax, humeri obtusely prominent, disc moderately convex, feebly striate, striæ with distant punctures, intervals slightly convex, with a single row of setæ on each, surface densely covered with cinereous scales. Body beneath and legs densely scaly, sparsely setulose. Length .24–.26 inch ; 6–6.5 mm.

A specimen of this species was sent to Lacordaire, who pronounced it a *Phyxelis*. This view I cannot accept as the scrobes are not superior as in that genus and the front is not transversely impressed. It is one of those forms (with the preceding species) which renders it extremely difficult at times to divide large masses of species into groups higher than genera.

Occurs from Kansas to British Columbia.

CIMBOCERA n. g.

Rostrum somewhat narrower and slightly longer than the head, parallel and sub-cylindrical at base, slightly dilated in front, tip sinuate, at base with very slight transverse impression, front slightly more convex, alæ moderately prominent. Scrobes moderately deep, short, arcuate and directed rather rapidly inferiorly. Antennæ moderate, sub-apical, scape clavate, passing slightly the anterior margin of the eye; funicle 7-jointed, joints 1–2 longer, the first longer than the second, 3–7 short, broader than long, the last very close to the club and broader; club oval. Eyes oval, slightly pointed beneath. Thorax cylindrical, broader than long, apex and base truncate, sides moderately arcuate, lobes feeble, distinctly fimbriate. Scutellum invisible. Elytra regularly oval. Humeri rounded. Metasternum short, side pieces narrow, suture distinct. Intercoxal process moderate, arcuate in front; second segment of abdomen as long as the two following united, first suture strongly arcuate at middle. Anterior tibiæ alone mucronate, articular surfaces of hind tibiæ feebly cavernous. Tarsi setose beneath, third joint not broader than the second and very feebly emarginate. Claws free. Surface scaly and hairy.

The unique species on which the above genus is founded, resembles in general aspect certain elongate males of *Trigonoscuta pilosa*. The genus by the form of its tarsi and the seventh joint of funicle, approaches *Eupagoderes* of the group *Ophryastes*, differing however in the structure of the abdomen and metasternal side pieces.

C. pauper, n. sp.

Oblong oval, piceous, densely covered with pale brownish scales sparsely variegated with cinereous and with erect hairs. Head and rostrum as long as the thorax, moderately densely covered with pale brownish and cinereous scales intermixed and sparsely hairy, rostrum feebly canaliculate. Thorax cylindrical, slightly broader than long, apex and base truncate, sides moderately arcuate, disc convex, densely scaly and sparsely hairy. Elytra oval, finely striate, striæ indistinctly punctured except at the sides, intervals flat, densely scaly, each with two rows of moderately long yellowish hairs. Body beneath and legs much less densely scaly than above, sparsely hirsute. Length .24 inch; 6 mm.

This species is of the form and size of *Peritelus griseus* of Europe, and resembles it somewhat in vestiture.

One specimen, Dacota.

Group IV. **Phyxeles.**

Rostrum slightly narrower than the head, alæ not prominent. Scrobes superior, badly defined, feebly arcuate, rapidly evanescent posteriorly and not attaining the eyes. Second segment of the abdomen longer than the two following united, separated from the first by a straight* suture.

The validity of the separation of this as a distinct group in our fauna seems somewhat doubtful, the only character by means of which it may be distinguished from the preceding group is found in the position of the scrobes. I have adopted a group name in accordance with the only genus known to me, as experience has already shown that groups of genera formed on the Lacordairean basis are not at all times those which form from the basis adopted in the present memoir which is but a modification and amplification of that suggested by Dr. LeConte.

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* Lacordaire says arcuate. It really appears so when the scales and crust remain, but when these are removed the suture will be found as stated.

One genus occurs in our fauna.

PHYXELIS Sch.

Phyxelis Schönh. Curc. vii, 1, p. 122.

Rostrum longer and somewhat narrower than the head, slightly arcuate, parallel, sub-angular, tip slightly emarginate with small smooth space limited by an elevated line. Scrobes visible from above, moderately deep badly defined, arcuate and not attaining the eyes. Antennæ moderate, scape gradually clavate attaining the margin of the thorax; funicle 7-jointed, 1–2 longer, 3–7 oval, club oval. Eyes oval, slightly oblique, coarsely granulated. Thorax broader than long, sides moderately arcuate, ocular lobes feeble, apex and base truncate. Scutellum invisible. Elytra rather broadly oval, convex, not wider at base than the thorax and feebly emarginate, humeri obtuse. Metasternal side pieces narrow connate without distinct suture. Intercoxal process broad, truncate. Second segment of abdomen longer than the two following together, first suture straight. Tibiæ mucronate, posterior corbels open. Tarsi short, stout, fourth joint deeply bilobed, claws small, free.

The presence of thoracic lobes is the only character in the way of placing this genus near *Cercopeus.*

P. rigidus Say (*Barynotus*) Curc. of N. A. p. 2; Schönh. Curc. ii, p. 312; Schönh. (*Phyxelis*) Curc. vii, 1, p. 124; *glomerosus* Boh. Sch. Curc. vii, 1, p. 123; *setiferus* Boh. loc. cit. p. 124.

Form ovate, piceous, surface moderately densely scaly and obscured by a luteous exudation coating. Head and rostrum longer than the thorax, densely scaly and sparsely setigerous, rostrum at base with more or less distinct transverse impression. Thorax somewhat variable in form, broader than long, sides moderately arcuate, usually narrowed in front, base feebly arcuate, disc convex, median line more or less impressed, surface densely scaly and sparsely setigerous. Elytra broadly oval, base truncate, humeri sub-rectangular, disc moderately convex indistinctly striate, intervals feebly convex, each with a single row of not closely placed sub-erect setæ. Body beneath clothed as above, legs sparsely setigerous. Length .14–.20 inch; 3.5–5 mm.

The color of the coating varies very greatly, usually pale ochreous sometimes dark brown, and it adheres so closely and so obscures the true sculpture of the insect as to render it almost impossible to obtain an accurate idea of the surface. I cannot find any reason for distinguishing three species in our fauna.

Occurs from Canada to Georgia. Not rare.

Tribe II. OTIORHYNCHINI.

Antennæ long, scape always passing the eyes behind. Scrobes variable but never at the same time linear and directed inferiorly. Metasternal side pieces usually entirely concealed by the elytra, rarely of moderate width. Mesosternal epimera small. Elytral striæ entire in all our genera, tenth or marginal always distant from the preceding in its entire length.

It is extremely difficult to give characters which define tribes of Rhynchophora with any degree of certainty, and it is frequently found that a species can only be assigned a position by the consideration of almost its entire structure with considerable allowance for facies, and not a little, by the experience of the student.

Some of the genera placed in the *Otiorhynchini* by Lacordaire, have been removed and will constitute portions of tribes in Division ii, with wide metasternal side pieces.

Our genera form four groups which may be distinguished as follows :

Funicle 6-jointed ; articular surface of hind tibiæ enclosed, tips of hind tibiæ truncate with broad oval space .... **Agraphi.**
Funicle 7-jointed ; articular surface free, tips of hind tibiæ with a single row of fimbriæ.
Claws free.
Antennæ long ; outer joints of funicle long. **Otiorhynchi.**
Antennæ shorter; outer joints short or moniliform.. **Trachyphlœi.**
Claws connate.
Antennæ as in *Otiorhynchi*........................ **Periteli.**

The *Periteli* are placed after the *Otiorhynchi* from their greater similarity of form and structure, the only difference between the two tribes is found in the claws.

Group I. Agraphi.

Antennæ moderate, scape longer than the funicle and club, moderately arcuate ; funicle 6-jointed ; club broadly oval slightly flattened, composed in great part of the first joint only, the other joints retracted and very indistinct. Tarsi long, slender, third joint very feebly emarginate and scarcely wider than the second. Hind tibiæ truncate at tip with broad, oval smooth space, cotyloid cavities internal. Anterior tibiæ with outer apical angle slightly prolonged ; anterior and middle tibiæ with inner angle mucronate.

The above characters appear to warrant the separation of *Agraphus* as a group by itself as suggested by Lacordaire who, however, failed to notice the structure of the antennal club and placed the genus in a group in which the hinder cotyloid cavities are open. These latter are really very strongly cavernous, more so in fact than in any other genus in our fauna.

Agraphus alone constitutes this group.

AGRAPHUS Sch.

Agraphus Schönherr, Gen. Curc. ii, p. 640.

Rostrum longer and narrower than the head, with an oblique constriction behind the scrobes, tip slightly declivous and truncate. Scrobes distant from the tip, deep in front and enclosed by an elevated margin, broadly open and shallow behind. Front with shallow transverse impression. Eyes oval, oblique, pointed beneath. Antennæ sub-median, densely scaly, scape attaining the thorax, funicle much shorter than the scape, 6-jointed, joints gradually shorter, sixth rather close to the club ; the latter oval obtuse, scaly, composed in great part of the first joint only. Thorax oval, truncate at apex, broadly arcuate at base. Scutellum small, triangular. Elytra very convex oval, slightly attenuate behind. Legs moderate, thighs rather strongly clavate, tibiæ slightly dilated at tip. Tarsi slender, ciliate beneath, three fourths the length of the tibiæ, joint three feebly emarginate and scarcely wider than the second. Claws free. Second segment of abdomen not longer than the two following united, separated from the first by a nearly straight suture.

A. bellicus Say, (*Peritelus*) Curculionidæ, p. 13 ; Am. Ent. i, p. 274 ; *leucophæus* Gyll. Sch. Gen. Curc. ii, p. 641.

Form elongate oval, densely covered with cinereous scales faintly clouded. Head and rostrum slightly longer than the thorax. Thorax oval, broader than long, sides moderately arcuate, apex narrower than the base and slightly truncate, base arcuate, surface regularly convex, sparsely and coarsely punctured. Elytra oval slightly attenuate posteriorly, not wider at base than the thorax, nearly three times as long and conjointly emarginate at base ; surface finely striate, striæ distantly punctured, intervals very feebly convex. Body beneath and legs densely covered with cinereous scales, and the tibiæ sparsely fimbriate. Length .26–.34 inch ; 6.5–8.5 mm.

Occurs from Pennsylvania to Florida.

Group II. **Otiorhynchi.**

Antennæ long, rather slender, scape passing slightly the anterior margin of the thorax, funicle 7-jointed, first two joints longer than the others, joints 3–7 obconical, moderately long, club oval, acute at tip. Cotyloid cavities of hind tibiæ terminal. Tarsal claws free.

The longer antennæ as defined by the form of the outer joints of the funicle, alone distinguish this group from the next. The genera are not numerous and are known by the characters given in the following table :

Metasternal side pieces entirely concealed by the elytra ; suture obliterated. Hind tibiæ with two short fixed spurs........................ **OTIORHYNCHUS.**

Metasternal side pieces linear ; suture distinct in its entire length.

Hind tibiæ with two short, fixed, terminal spurs, first suture of abdomen feebly arcuate. Front slightly transversely impressed.................................... **SCIOPITHES.**

Hind tibiæ without terminal spurs, first suture strongly arcuate at middle. Front not impressed.................................... **AGRONUS.**

Metasternal side pieces moderately wide, suture distinct.

Hind tibiæ without terminal spurs; first suture of abdomen strongly arcuate at middle.................................... **NEOPTOCHUS.**

The fixed spurs of the hind tibiæ appear not to have been noticed by any author; they are in fact, difficult to see in some species, while in others, quite large and prominent (*O. maurus*). I am not at present aware of the occurrence outside of the tribe Otiorhynchini of any similar structure. *Thecesternus* has the tibiæ bimucronate. The female of *Ithycerus* presents curious characters. On each tibia in addition to the usual mucro are two spurs, one of which at least is moveable. The male has the tibiæ simply mucronate.

OTIORHYNCHUS Germ.

Otiorhynchus Germar, Ins. Spec. nov. p. 343.

Rostrum as long as the head, moderately robust, more or less dilated at tip which is notched at middle. Antennæ anterior long; scape long, very slightly arcuate not longer than the funicle and club, attaining the thorax; funicle 7-jointed, first two joints longer, joints 3–7 obconical. Scrobes superior deep, sides strongly divaricate behind. Eyes rounded or slightly oval. Thorax oval, longer than wide. Elytra variable, broadly or elongate oval. Scutellum very small or indistinct. Legs moderately long, thighs clavate, tibiæ feebly arcuate near the tip. Cotyloid cavities of hind tibiæ terminal. Tarsi moderately dilated, spongy pubescent beneath, third joint deeply bilobed. Second abdominal segment not as long as the two following united, separated from the first by an arcuate suture.

This genus contains in our fauna species which have been introduced from Europe, and which have established themselves in the north-eastern parts of our territory. Two are found in Greenland, which also occur in the extreme north of Europe, their distribution being due to natural laws and not through the agency of commerce.

The species are known as follows:

Femora toothed.

Tooth very small. Rostrum sulcate, at tip with a bifid carina, elytra sulcate.................................... **sulcatus.**

Tooth large, rostrum not sulcate, tip not carinate, elytra not sulcate.................................... **ligneus.**

Femora not toothed.

Thorax coarsely granulate.
  Rostrum sulcate, elytra with rough sculpture...... **rugifrons.**
  Rostrum finely carinate, elytra feebly sculptured.. **maurus.**
Thorax smooth, finely punctured.
  Rostrum flat above, elytra nearly smooth......... **monticola.**

O. sulcatus Fab. Syst. Ent. p. 155; Herbst, Käfer, vi, p. 347, pl. 87, fig. 5, ? *Sayi* Boh. Sch. Gen. Curc. vii, p. 523. (European synonymy omitted).

Form oblong, brown black, sub-opaque. Rostrum sulcate at middle, tip emarginate and with a V shaped carina; surface sparsely and coarsely punctured and sparsely hairy. Thorax sub-cylindrical, sides moderately arcuate, widest in front of middle, not longer than wide, surface with rounded tubercles rather closely placed, each bearing a short hair. Elytra oblong oval, disc slightly flattened, humeri obtusely rounded, surface broadly striate, striæ coarsely punctured, intervals feebly convex and with a row of shining rounded tubercles rather closely placed and with small patches of short yellowish hair irregularly placed. Body beneath black, shining and very sparsely hairy. Femora strongly clavate, deeply sinuate near the tip and with a very small acute tooth. Length .34 inch; 8.5 mm.

This species has been so often described in easily accessible European publications, that I consider it unnecessary to add to the above description, this with the table being sufficient to enable it to be recognized by the student of our fauna.

Occurs in Massachusetts, Canada, Newfoundland and Nova Scotia.

O. ligneus Oliv. Ent. v, 83, p. 378, pl. 31, fig. 473.

Form oblong, color piceous, shining. Rostrum flat, emarginate at tip, surface very coarsely and closely punctured, between the eyes a deep puncture. Thorax nearly spherical, truncate at apex and base, surface tuberculate, (at middle the tubercles become confluent in rows with deep sulci between them), each tubercle punctured at summit and bearing a short hair. Elytra oval, striate at the sides, striæ obsolete on the disc and with coarse punctures closely placed, intervals flat on the disc and feebly muricate, at sides moderately convex and slightly tuberculate. Legs piceo-rufous, femora clavate, sinuate near the tip and with a moderately strong tooth bearing a denticle on its free edge. Length .20 inch; 5 mm.

This is the smallest species which has occurred with us, and may be easily known by the femoral armature and the nearly spherical thorax with its peculiar sculpture.

Occurs in the New England States.

O. rugifrons Gyll. Ins. Suec. iii, p. 319.

This species resembles *sulcatus*, but is somewhat more robust and with the elytra more broadly oval, and the humeri more oblique. The femora are moderately sinuate near the tip and without tooth. The surface is sparsely hairy, the hairs of the elytra being short and arranged in a double row on each interval. Length .38 inch ; 9.5 mm.

Occurs in the Middle States.

O. maurus Gyll, Ins. Suec. iii, p. 293 ; *nodosus* O. Fabr. Fauna Grönl. p. 187.

Black, moderately shining. Rostrum flat above, without triangular impression at tip, obtusely carinate at middle, a slight perforation between the eyes, surface coarsely punctured, sparsely pubescent. Thorax slightly broader than long, sides arcuate, apex truncate, base feebly arcuate, surface densely tuberculate and sparsely pubescent. Elytra regularly oval, finely striate, striæ coarsely punctured, intervals flat, slightly wrinkled and with patches of scale-like hairs irregularly interspersed. Body beneath and legs black, femora unarmed. Length .38 inch ; 9.5 mm.

Easily known by the comparatively smooth elytra and granulate thorax.

Occurs in Greenland.

O. monticola Germ. Ins. Spec. nov. p. 361 ; *arcticus* O. Fabr. Fauna Grönl. p. 188.

Oblong oval, black, shining. Rostrum above flat, sparsely punctured, median line smooth, a puncture between the eyes. Thorax longer than wide, widest in front of middle, sides moderately arcuate and very slightly sinuate near the base ; surface shining, finely and rather sparsely punctured. Elytra regularly oval, surface not striate, but with moderate punctures in indistinct rows, intervals irregularly bi-seriately punctulate. Body beneath black, shining, more rugulose than above. Femora unarmed. Length .26-.28 inch ; 6.5-7 mm.

The tip of the rostrum on each side of the emargination is slightly prolonged in an obtusely conical process. The same may be seen though to a much less extent in the other species. This species is easily known by its smooth shining surface and sparsely punctured thorax.

Occurs in Greenland.

SCIOPITHES, n. g.

Rostrum stout, not longer than the head, cylindrical and slightly narrowed toward the tip which is emarginate and with a crescentic impressed space, a very feeble impression between the eyes. Scrobes superior, cavernous and of oval form. Antennæ long, scape passing the anterior margin of the thorax, rather slender, gradually thicker toward tip and rather strongly arcuate ; funicle 7-jointed, the first two joints moderately long, joints 3-7 obconical gradually shorter ; club elongate oval. Eyes oval, slightly longitudinal. Thorax cylindrical, sides slightly arcuate. Elytra rather broadly oval, moderately inflated. Scutellum wanting. Metasternum very short. Intercoxal process of abdomen short, broad, truncate in front, second segment but little longer than the third separated from the first by a nearly straight suture. Cotyloid cavities of hind tibiæ terminal, the tibiæ with two short fixed spurs ; anterior and middle tibiæ finely mucronate. Claws free.

This genus cannot by the above characters be referred to any other group, established by Lacordaire, than the *Otiorhynchides vrais*, in which I can find no genus with similarly formed antennal scrobes. The metasternal side pieces although very narrow are distinct and have the suture plainly visible in its entire length.

This genus represents in our fauna *Sciobius* of South Africa.

S. obscurus, n. sp.

Form oval, body densely covered with luteous scales, elytra with darker discal space limited behind by a very sinuous line. Head and rostrum together very little longer than the thorax, the latter with an extremely fine median carina, surface sparsely punctured. Thorax cylindrical, slightly wider than long, sides feebly arcuate, apex and base truncate, surface coarsely but sparsely punctured and with a shallow fovea on each side near the base, scales dense, color luteous, fine median and broader lateral lines paler. Elytra oval, very slightly attenuate behind, not wider at base than thorax, one-third longer than wide, striate, striæ punctured, intervals flat. the middle with one, the other with two rows of very short hairs, surface densely covered with luteous scales, with large irregular discal, darker space limited behind by a very irregularly sinuous line. Body beneath sparsely scaly. Legs densely scaly and sparsely hairy. Length .22–.24 inch ; 5.5–6 mm.

The style of coloration of this species nearly that of *Cercopeus*. It may however, become entirely unicolorous.

Occurs in California, Oregon and Vancouver.

AGRONUS, n. g.

Rostrum slightly longer than the head, and slightly narrower to tip, cylindrical above, slightly flattened and with fine groove, tip truncate with semicircular naked space. Scrobes superior, very short, cavernous, slightly converging and terminal. Eyes small, round, moderately prominent. Antennæ long, sub-terminal, scape passing the anterior margin of thorax, very gradually thicker to tip and feebly arcuate, funicle 7-jointed, first two joints longer, joints 3–7 obconical and gradually shorter; club elongate oval. Thorax cylindrical, base and apex truncate, sides very feebly arcuate. Elytra oblong oval, not wider at base than thorax. Scutellum wanting. Metasternum short, side pieces narrow, suture indistinct. Intercoxal process of abdomen short, broad, truncate, second segment longer than each of the two following, separated from the first by an arcuate suture. Cotyloid cavities of hind tibiæ terminal, the margin simply fimbriate with short spinules and without terminal spurs. Tibiæ not mucronate. Claws small, free.

This genus resembles the preceding in most of its characters, and differs in the absence of spurs to the hind and the mucro to the anterior and middle tibiæ ; the less distinct metasternal side pieces and the structure of the second abdominal segment. Allied to *Parameira* by Seidlitz' table, differs in its shorter scrobe and more slender antennæ.

A. cinerarius, n. sp.

Oblong oval, densely covered with uniformly colored cinereous scales. Rostrum and head longer than the thorax, sparsely punctured. Antennæ rufous, sparsely hairy. Thorax cylindrical, slightly wider than long, apex truncate and slightly narrower than the base, sides feebly arcuate, surface sparsely punctured. Elytra oval, slightly oblong, striate, striæ coarsely and rather closely punctured, intervals flat, densely scaly and with short, semi-erect scale-like hairs. Body beneath very sparsely clothed with short hairs. Legs rufous, very sparsely scaly and pubescent. Length .14–.18 inch; 3.5–4.5 mm.

A rather inconspicuous insect resembling the preceding in form but more elongate. In some specimens, probably males, the elytral intervals are slightly alternating in width.

Collected by Mr. G. R. Crotch in the Sierra Nevada Mountains of California, near Lakes Tahoe and Donner.

A. deciduus, n. sp.

Form oblong, piceous, moderately densely clothed with scales of pearly lustre. Head and rostrum slightly longer than the thorax, densely scaly and sparsely punctured, with short, pale, erect hairs sparsely placed. Antennæ piceous. Thorax broader than long, cylindrical, sides feebly arcuate, disc moderately convex, surface sparsely punctured and slightly rugulose and sparsely covered with pearly scales and erect pubescence. Elytra oblong oval, obsoletely striate, striæ with moderately coarse and close punctures, intervals flat, not densely scaly and each with two rows of moderately long erect pale hairs. Body beneath black, sparsely scaly and hairy. Legs sparsely scaly and hairy, piceous. Length .16 inch; 4 mm.

Of the same form as the preceding, and somewhat recalling the form of *Scythropus.* Differs from *cinerarius* by the pearly scales less densely placed and more deciduous and by the much longer hairs covering the surface.

Collected at San Francisco.

NEOPTOCHUS n. g.

Rostrum stout, not longer and as wide as the head, cylindrical, flattened above, tip emarginate. Scrobes lateral, terminal, cavernous in front, shallow and broad behind, attaining the eyes. Eyes round, moderately convex. Antennæ long, scaly; scape passing the anterior margin of the thorax, slender, very slightly thickening towards the tip, arcuate; funicle 7-jointed, first two joints long, joints 3–7 conical gradually decreasing in length, club oval. Thorax short, cylindrical, sides feebly arcuate. Scutellum absent. Elytra oval, moderately inflated. Metasternum short; side pieces moderate, suture distinct. Intercoxal process broad, truncate; second abdominal segment as long as the two following, separated from the first by a feebly arcuate suture. Cotyloid cavities of hind tibiæ terminal, tibiæ without fixed spurs or mucro, anterior and middle tibiæ not mucronate. Claws small, free.

The form of the only species composing this genus is much that of *Ptochus.*

N. adspersus Boh. (*Ptochus*) Sch. Gen. Curc. ii, p. 486; Seidl. Berl. Zeits. 1868. p. 41, (Beiheft); *tesselatus* Boh. loc. cit. p. 487.

Form oval, robust, densely clothed with pale cinereous scales, with obscure spots near the humeri in some specimens. Head and rostrum longer than the thorax. Rostrum with smooth crescentic space at tip, above slightly transversely concave; surface sparsely punctured and densely scaly. Thorax transverse, cylindrical, sides feebly arcuate, base and apex truncate, surface coarsely punctured and irregular, and moderately densely scaly. Elytra broadly oval, convex, three times the length of thorax, striate, striæ with distant punctures, intervals flat, densely scaly, each with a row of very short erect scales. Body beneath and legs densely scaly. Length .14–.16 inch; 3.5–4 mm.

This species from its *Ptochus*-like form cannot be confounded with any other in the present group, while the wider metasternal side pieces and the absence of the fixed spurs to the hind tibiæ, the lateral scrobes and scaly antennæ serve to distinguish the genus. Bohemann says the femora have a small tooth, probably from an error of observation, as on p. 487, the tooth is not mentioned in the synonym.

Appears to be not rare in Florida.

This insect has been referred to the genus *Ptochus* by Seidlitz (loc. supra cit.) an opinion which I cannot adopt, the broad intercoxal process and the free claws appear to me abundantly sufficient to separate it. Species with free claws are, however, admitted by Seidlitz in *Ptochus.*

Group III. **Periteli.**

Antennæ long, scape attaining or slightly passing the anterior margin of the thorax; funicle variable in length, 7-jointed; club oval. Tarsal claws connate.

The cotyloid surfaces of the hind tibiæ are entirely open in all the genera of this group, glabrous in six, scaly in the remainder. In the genera in our fauna the rostrum is comparatively or very short, nothing occurs at all approximating the length of that of *Peritelus griseus* of Europe. The alæ of the rostrum are divergent in but one genus, and then but feebly.

Our genera are as follows:

First abdominal suture straight. Scrobes lateral.
  Alæ of rostrum slightly divergent; first two joints of funicle equal.............................. **PARAPTOCHUS.**
First abdominal suture arcuate.
  Cotyloid surface of hind tibiæ glabrous. Eyes without orbital groove.
    Hind coxæ open externally; first abdominal segment behind them very short .... **MYLACUS.**
    Hind coxæ closed externally; first abdominal segment normal.

  - Scrobes superior and convergent above.
    - Rostrum longer than the head, scrobes very short terminal; body with scales and setæ .... **THRICOLEPIS.**
    - Rostrum short; scrobes nearly attaining the eyes; body scaly only............ **PERITELOPSIS.**
  - Scrobes more lateral not converging above.
    - Scape as long (or very nearly so) as the funicle; tibiæ finely denticulate within .... **GEODERCES.**
    - Scape much shorter than the funicle; tibiæ not denticulate.................... **ARAGNOMUS.**
- Cotyloid surface of hind tibiæ densely scaly.
  - Scrobes superior, slightly convergent above.
    - Eyes indistinctly surrounded by a groove. Scape feebly arcuate....... **DYSTICHEUS.**
  - Scrobes lateral, not at all convergent.
    - Orbital groove deep.
      - Scape arcuate and slightly twisted; scrobes lateral, deep, and attaining the eyes.................................. **EUCYLLUS.**
      - Scape straight or very feebly arcuate.
        - Scrobes very shallow posteriorly, not attaining the eyes...................... **THINOXENUS.**
        - Scrobes deep, attaining the eyes......... **RHYPODES.**

The genera above indicated are so arranged as to exhibit a gradual transition from the Ptochoid forms of the preceding group to the Trachyphlœoid forms of the next. The rostrum tends to become shorter, also, as the advance is made from the first to the last genus. The vestiture varies. In one species *Mylacus saccatus* Lec., the surface is sparsely pubescent without scales, *Peritelopsis globiventris* Lec., is scaly only without trace of hairs or setæ; all the remaining species are densely scaly and with short erect setæ. As a general rule the metasternal side pieces are extremely narrow in the earlier genera (entirely concealed posteriorly in *Mylacus*) and become more distinctly wider in the later genera, the suture, however, is so very indistinct as to make it almost impossible to use the character systematically.

The scrobes vary greatly in form. In several genera they are plainly superior and rather short, converging above. In others it is not easy to determine whether to call them lateral or superior. When the scrobes are much more distinctly open when viewed from above than when seen from the sides they are called superior and conversely. None of our genera show a lateral form of scrobe such as is seen in *Omias* or *Lichenophagus*.

The occurrence of short fixed spurs to the hind tibiæ in addition to the mucro and at all events entirely independently of it, is noticed here. In one genus their occurrence appears to be sexual, in others it cannot be so referred.

The occurrence of scaly tips to the hind tibiæ does not appear, from descriptions, in any foreign genus of the group. Those in our fauna might form a distinct group from the Periteli, and would have been so constituted, but I find on examination that *Lichenophagus* would occupy an intermediate place by the groove surrounding the eyes and by the entirely glabrous tips of the hind tibiæ. It is also to be regretted that one of our species only appears to be congeneric with any previously described.

PARAPTOCHUS Seidl.

Paraptochus Seidlitz, Berl. Zeitschr, 1868. Beiheft, p. 35.

Rostrum scarcely as long as the head, and separated by an arcuate impression, robust, sub-quadrangular, tip emarginate with a smooth space limited by an angular line, alæ moderately divergent. Scrobes deep in front, moderately arcuate, gradually shallower posteriorly and attaining the eye. Antennæ moderate, sub-terminal, scaly; scape, feebly clavate, slightly arcuate and barely attaining the margin of the thorax; funicle 7-jointed, first two joints longer equal, joints 3–7 gradually shorter, club oval. Eyes round, coarsely granulated and not prominent. Thorax cylindrical, slightly narrower in front, sides feebly arcuate. Scutellum wanting. Elytra oval, convex. Metasternal side pieces indistinct, narrow. Intercoxal process of abdomen broad, truncate, second abdominal segment not as long as the two following united and separated from the first by a straight suture. Claws connate.

The above genus contains only *Peritelus sellatus* Boh. The straight first abdominal suture excludes it from the genus to which it has been referred, and gives it considerable affinity with *Caterectus*.

P. sellatus Boh. (*Peritelus*) Eugen. Resa 1859, p. 126; *californicus* (*Paraptochus*) Seidl. Berl. Zeitschr. 1868, Beiheft, p. 35.

Form oval, moderately robust. Head and rostrum as long as the thorax, rostrum with fine median line, surface densely scaly, scales dark cinereous with whitish setæ sparsely placed. Thorax cylindrical, slightly narrower in front, broader than long, sides feebly arcuate, apex and base truncate, disc moderately convex, coarsely and deeply punctured, surface densely scaly and with erect whitish setæ, scales brownish in a broad median band, pale cinereous at the sides. Elytra oval, slightly inflated, nearly three times as long as the thorax, striate, striæ punctured, intervals flat with erect setæ irregularly placed, surface densely covered with cinereous scales with large discal pale-brownish space limited behind by a sinuous darker line. Body beneath less densely scaly. Length .18 inch; 4.5 mm.

When deprived of scales the surface color is pale brownish. The anterior and middle tibiæ are very feebly mucronate and the hind tibiæ of the ♀ have two short fixed spurs. The color of the scales varies and the large discal spot of the elytra may become evanescent. The erect hairs are also variable, and assume the color of the surface in which they are placed.

Collected at Crystal Springs, California, by Mr. G. R. Crotch.

MYLACUS Sch.

Mylacus Schön. Gen. Curc. viii, 1, p. 144.

Rostrum as long as the head and slightly narrower to the tip which is very feebly emarginate and with smooth space, above broadly but feebly channeled, a feeble transverse impression at base, alæ feebly prominent. Scrobes superior, very slightly convergent, deep in front, broadly open and very shallow posteriorly, not attaining the eyes. Antennæ moderately long, sub-apical, sparsely hairy; scape gradually clavate, slightly arcuate, attaining the anterior margin of thorax; funicle 7-jointed, joints 1–2 longer, 3–7 sub-moniliform, club oval. Thorax cylindrical, short, transverse. Scutellum wanting. Elytra globoso-oval. Metasternum very short, side pieces entirely covered posteriorly by the elytra. Hind coxæ open exteriorly attaining the elytral margin. Intercoxal process of abdomen very broad, truncate; first segment deeply emarginate by the coxæ and very short behind them; second abdominal segment very little longer than the third separated from the first by an arcuate suture. Tibiæ not mucronate. Claws almost entirely connate. Body pubescent.

M. saccatus Lec. (*Ptochus*) Pacif. R. R. Rep. App. 1, p. 56.

Form oval, color black, shining, surface sparsely clothed with short cinereous pubescence. Head and rostrum one and a-half times longer than the thorax, moderately densely punctured, sparsely pubescent. Thorax transverse, twice as broad as long, sides feebly arcuate, apex and base truncate, disc convex, surface densely and at the sides confluently punctured, surface sparsely pubescent. Elytra broadly oval ♂ or globoso-oval ♀, with striæ of coarse punctures rather closely placed. Body beneath black, shining, metasternum densely punctured at the sides, abdomen smoother, more shining, surface sparsely pubescent. Legs black, sparsely pubescent. Length .12–.16 inch; 3–4 mm.

The hind tibiæ of the males have at the tip of the hind tibiæ immediately in front of the tarsal articulation a very feeble emargination, the female has two small fixed spurs.

There can be little doubt that this species should be referred to *Mylacus*. The characters given in the table supplemented by those above given will serve to distinguish it from all others in our fauna.

Occurs in California and Oregon.

THRICOLEPIS n. g.

Rostrum nearly as long as the head, slightly narrower towards the tip which is feebly emarginate, alæ not divergent. Scrobes superior, short, terminal, cavernous, somewhat reniform in shape and convergent above. Antennæ moderate, sub-terminal, scape feebly arcuate, attaining the margin of the thorax; funicle 7-jointed, longer than the scape, first two joints longer than the others, joints 3–7 obconical; club oval. Eyes round. Thorax cylindrical, sides feebly arcuate, narrowed in front. Scutellum not visible. Elytra broadly oval, convex. Intercoxal process broad, truncate. Second segment of abdomen as long as the two following united, separated from the first by a strongly arcuate suture. Tibiæ not mucronate. Claws connate. Body scaly and with erect setæ.

This genus is closely allied to *Peritelus*. It differs at first sight in the vestiture of the body. The scrobes are much shorter and very decidedly convergent above, the alæ not divergent, antennæ, especially the scape, shorter. The genus is also allied to *Mylacus* in which, however, the surface is pubescent.

Two species are known to me, both Western.

T. inornata, n. sp.

Form oval, moderately robust. Head and rostrum longer than the thorax, surface sparsely punctured and not densely scaly. Antennæ rufo-testaceous, sparsely hairy. Thorax cylindrical slightly wider than long, apex and base truncate, sides feebly arcuate, slightly narrower in front and very feebly constricted at the sides behind the apex; surface coarsely and deeply punctured, sparsely scaly and with erect hairs. Elytra nearly three times as long as the thorax, oval, slightly inflated, with rows of moderately coarse, closely placed punctures, intervals flat, moderately densely scaly and with a row of short black erect setæ. Body beneath sparsely scaly, abdomen sparsely punctured and very sparsely hairy. Legs rufo-testaceous or slightly darker, sparsely hairy. Length .14 inch; 3.5 mm.

The scales covering the body are of pearly lustre and very easily removed, and beneath them the surface is black and shining. The elytra are not striate, the punctures merely form regular rows and are of large size and rather closely placed. In some specimens of narrower form, and which are probably males, the striæ of the disc are slightly impressed near the base. Specimens occur of slightly larger and smaller size than the measurement given.

Occurs from northern California to Utah.

T. simulator, n. sp.

Form oval, moderately robust. Head and rostrum longer than the thorax, surface very densely scaly and with very short setæ. Antennæ pale rufous, slightly hairy, scape sparsely scaly. Thorax wider than long, sub-cylindrical, slightly narrowed in front, base and apex truncate, sides feebly arcuate, modertely convex, surface coarsely and rather deeply punctured, densely scaly, scales cinereous and with a broad median space darker. Elytra oval, slightly inflated, surface finely striate and with rather small punctures distantly placed, intervals flat, densely covered with cinereous scales, with fuscous spots irregularly placed, a sinuous band of the same color at the posterior declivity and with very short erect setæ in a single row on each interval. Body beneath moderately densely scaly. Legs rufous, moderately densely scaly and with short hairs. Length .12 inch; 3 mm.

This species imitates some of the least distinctly marked specimens of *Paraptochus sellatus.* The scales are very densely placed and are closely adherent to and conceal the surface. Their color is pale, cinereous, except a broad median thoracic space and the few spots near the base of the elytra and the very irregular line at the declivity which are fuscous. This species and the preceding are similar in form to *Peritelus griseus* of Europe, and are about two-thirds the size.

Collected at Fort Tejon, California, by Mr. G. R. Crotch.

PERITELOPSIS n. g.

Rostrum not as long as the head, slightly flattened, narrower to tip which is feebly emarginate, alæ not divergent. Scrobes superior, cavernous, very slightly arcuate, convergent above, attaining the eyes. Eyes very slightly oval. Antennæ (entirely wanting) apical. Thorax cylindrical, narrower in front, sides moderately arcuate. Scutellum small. Elytra sub-globoso-oval. Metasternal side pieces extremely narrow. Intercoxal process broad, truncate. Second abdominal segment scarcely as long as the two following separated from the first by an arcuate suture. Femora moderately clavate, tibiæ finely mucronate, claws connate. Body scaly.

This genus is doubtless very near *Peritelus.* The alæ of the rostrum are not at all divergent, and the rostrum very short, Possibly the genus might enter one of Seidlitz' groups of *Peritelus.*

P. globiventris Lec. (*Ptochus*) Pacif. R. R. Rep. App. 1, p. 56.

Form oval, surface covered but not densely, with scales of a pearly lustre. Head and rostrum scarcely longer than the thorax, rostrum with a smooth space at tip, limited by an angulated line, surface coarsely and deeply punctured and sparsely scaly, vertex with a short linear impression. Thorax broader than long, slightly narrower in front, sides moderately arcuate, apex and base truncate, disc moderately convex, coarsely and deeply punctured, surface sparsely scaly. Elytra sub-globoso-oval, longer than broad, striate, striæ (those of disc at base not impressed) with moderate punctures not closely placed, intervals at sides and apex slightly convex, surface scaly. Body beneath coarsely punctured, sparsely scaly, abdomen very sparsely punctured and with few hairs. Legs piceous, sparsely scaly and hairy. Length .16 inch ; 4 mm.

The form of this insect is nearly that of *Peritelus griseus,* but with a much shorter rostrum. The scales of the surface are not densely placed, and the piceous color of the body is readily seen between them.

One specimen deprived of antennæ, from California.

GEODERCES n. g.

Rostrum nearly as long as the head, robust, parallel, sub-cylindrical, at base a feeble arcuate impression, tip feebly emarginate, a smooth space limited behind by an angulate line, alæ not prominent. Scrobes lateral, narrow, not attaining the eyes, crescentic when viewed laterally. Antennæ moderately long, scape very nearly as long as the funicle, slightly passing the anterior margin of thorax; funicle 7-jointed, first two joints longer, joints 3–7 elongate, obconical gradually shorter; club elongate oval. Eyes round, moderately prominent. Thorax oval, truncate at apex and base. Scutellum not visible between the elytra. Elytra oval convex. Metasternum short, side pieces narrow, indistinct. Intercoxal process broad, truncate; second segment of abdomen shorter than the two following united, separated from the first by a feebly arcuate suture. Tibiæ with very short mucro at tip, and very minutely denticulate internally. Claws connate. Surface densely scaly and with short erect hairs.

This genus, of which *Trachyphlœus melanothrix* Kby. is the type, has nothing at all resembling it outside of our fauna. It may be said to resemble *Trigonoscuta* in form with a somewhat narrower thorax. In addition to the minute mucro, the hind tibiæ have, in addition, two short fixed spurs. As these are found in all the specimens before me, I cannot suppose them to be sexual. The denticulations of the tibiæ are minute, and though sufficiently distinct may easily be overlooked. This genus seems by the table of Seidlitz to be allied to *Epiphaneus.*

Two species occur in our fauna, of very similar aspect, which differ as follows:

Second joint of funicle distinctly longer than the first; erect hairs of elytra very short, feebly erect and all black.. **melanothrix.**
Second joint slightly shorter than the first; elytra hairs longer, erect and white and black intermixed. ..... **incomptus.**

G. melanothrix Kby. (*Trachyphlœus*) Fauna Am. Bor. iv, p. 202.

Form oval, robust, densely covered with brownish scales, with short paler markings very indistinct, and with very short, semi-erect blackish hairs very sparsely placed. Head and rostrum very slightly longer than the thorax, a short impressed line at vertex, rostrum flat, coarsely but sparsely punctured and densely scaly. Antennæ castaneous, sparsely pubescent. Thorax oval, very slightly wider than long, truncate at apex and base, a slight constriction one-fourth behind the apex, sides arcuate, disc moderately convex, coarsely but very evenly perforato-punctate, surface densely covered with brownish scales with a narrow paler line at the sides. Elytra oval, sub-globose, about one-fourth longer than wide, base emarginate, humeri oblique, sides sub-parallel for a short distance at middle, apex very obtusely rounded, surface densely covered with brownish scales with indistinct paler spaces at the sides of the declivity, and with striæ of moderate punctures not very closely placed. Body beneath castaneous, coarsely punctured and scaly, abdomen more sparsely punctured and with hair-like scales. Legs densely covered with brownish scales and sparsely hairy, femora with a broad ring of whitish scales near the tip. Length .22–.32 inch; 5.5–8 mm.

In those specimens with the markings more clearly defined, the narrow pale line of scales at the side of the thorax continues on the elytra, becom ing broader as it passes posteriorly, where it is bounded in front and behind by a line of darker scales. I have two specimens before me of an entirely uniform pale-brown color.

Occurs in Canada and New York.

G. incomptus, n. sp.*

This species so closely resembles *melanothrix* in form, size and color that it is unnecessary to add any description. It differs only in the characters given in the short table, so that if the description of *melanothrix* be repeated with those changes only, it will equally apply to this one.

Occurs from San Francisco to Vancouver.

ARAGNOMUS n. g.

Rostrum shorter than the head, broader than long, flattened above, a feeble transverse impression at base, tip feebly emarginate and with a smooth crescentic space limited behind by a curved line. Scrobes sublateral, not convergent above, cavernous, nearly attaining the eyes. Antennæ scaly, moderate; scape slightly arcuate, barely attaining the margin of the thorax; funicle 7-jointed, nearly one-third longer than the scape, first joint nearly equal to the two following, joints 2–7 obconical, gradually decreasing in length; club oval. Eyes rather small, round, not prominent. Thorax cylindrical, sides feebly arcuate at middle only. Scutellum invisible. Elytra oval. Intercoxal process broad, truncate. Second segment of abdomen as long as the two following, separated from the first by an arcuate suture. Anterior tibiæ feebly mucronate. Claws connate.

This insect recalls in smaller size *Paraptochus sellatus* with less broad elytra. The eyes are more distant from the thoracic margin than is seen in any of the other genera of the group, and the head and rostrum rather large when compared with the thorax. From Seidlitz's table this genus appears to occupy a doubtful position. The frontal impression is sufficiently distinct to ally it to *Sciobius*, etc., but the structure of the abdomen will not warrant such position. The scrobes are moreover in such position that it is impossible to say whether they should be called superior or lateral. They are by no means lateral in the manner of *Trachyphlœus* and *Lichenophagus*.

A. griseus, n. sp.

Form oval, robust, surface densely covered with cinereous scales, with sparsely placed, erect, black setæ, longer on the elytra. Head and rostrum longer than the thorax, a slight frontal line, surface sparsely and deeply punctured, densely scaly, and with short erect hairs. Thorax slightly broader than long, cylindrical, truncate at apex and base, sides suddenly arcuate at middle, disc moderately convex, coarsely and regularly punctured, densely scaly, a broad median stripe fuscous, sides cinereous, sparsely setose. Elytra oval, moderately convex, striate, striæ with rather fine, closely placed punctures, intervals flat; surface densely covered with cinereous scales, darker on the disc and with a transverse very sinuous line at the declivity, and with erect black setæ in regular rows on the intervals. Body beneath densely scaly. Legs densely scaly and sparsely setose. Length .14 inch; 3.5 mm.

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* No description of this species has until now appeared. I adopt the specific name by which it is known in our cabinets. Mention of the species first occurs in a catalogue of insects collected on the survey of the Pacif. R. R. where it is called *Trachyplœus*. See Pacif. R. R. Rep., App. 1, p. 21.

The surface color when deprived of scales is brownish testaceous.

One specimen California, no special locality known.

DYSTICHEUS n. g.

Rostrum as long as the head, robust, cylindrical, slightly flattened, very slightly arcuately narrowed from base to tip; tip slightly emarginate with smooth crescentic space limited behind by a ridge, upper side moderately deeply sulcate, groove slightly wider toward the tip. Scrobes superior very feebly convergent above, broadly open in their entire length (the sides very widely divergent behind), very shallow posteriorly, not attaining the eyes. Eyes moderate, coarsely granulated and surrounded by a fine groove. Antennæ moderately long, scape slightly arcuate and passing the anterior margin of the thorax; funicle 7-jointed, one-third longer than the scape, first joint longest, the others elongate obconical, gradually decreasing in length; club elongate, oval, acute. Thorax cylindrical, sides moderately arcuate. Scutellum invisible. Elytra regularly oval. Metasternum short, side pieces narrow. Intercoxal process of abdomen broad, truncate. Second segment of abdomen nearly as long as the two following, separated from the first by an arcuate suture. Anterior and middle tibiæ with very short mucro, tips of hind tibiæ scaly. Claws connate. Body scaly and hispid.

The scrobes in their entire extent are more open than in any genus known in the group. The eyes are less distinctly surrounded by a groove than the following genera. I can find no foreign genus resembling it.

D. insignis, n. sp.

Form oval. Head and rostrum as long as the thorax, coarsely and deeply punctured, and rugulose, and sparsely scaly and with short erect setæ, except in the median groove which is nearly smooth and extends to the base of the rostrum. Thorax cylindrical, slightly narrower in front, broader than long, apex and base truncate, sides moderately arcuate, disc moderately convex, coarsely, densely and deeply punctured, sparsely scaly and with very short setæ. Elytra regularly oval, sides feebly arcuate, striate, striæ with coarse, quadrate, closely placed punctures, intervals flat, densely covered with cinereous scales of elongate form, with darker patches irregularly intermixed, and two irregular rows of scale-like, short, erect setæ. Body beneath piceous, coarsely and densely punctured, abdomen smooth, sparsely punctured, sparsely scaly and pubescent. Legs piceous, sparsely scaly. Length .16 inch; 4 mm.

One specimen collected in the southern portion of California.

EUCYLLUS n. g.

Rostrum not longer than the head, robust, slightly narrowed in front, alæ not divergent, tip emarginate and with a very narrow smooth space. Scrobes lateral, moderately deep, feebly arcuate, passing directly backwards and attaining the eyes. Antennæ long, scaly; scape arcuate and slightly twisted, passing slightly the anterior margin of the thorax; funicle 7-jointed, slightly longer than the scape; joints 1–2 long, the second longer than the first, third slightly shorter than the first, 4–7 obconical, gradually shorter, club rather small, oval. Thorax cylindrical, sides moderately arcuate. Scutellum invisible. Elytra oblong oval. Intercoxal process broad, truncate, second segment not as long as the two following, separated from the first by an arcuate suture. Tips of hind tibiæ scaly, anterior and middle tibiæ mucronate. Claws connate. Body scaly and hispid.

This genus would be placed by Seidlitz' table near *Trachyphlœus*.

E. vagans, n. sp.

Elongate oval, densely scaly and with greyish setiform hairs. Head and rostrum nearly as long as the thorax, densely covered with cinereous and pale-brownish scales intermixed, and with short erect hairs sparsely placed, surface sparsely punctured. Thorax cylindrical, truncate at apex and base, slightly wider than long, sides moderately arcuate, disc moderately convex, sparsely punctured, densely scaly and sparsely hairy. Elytra elongate oval, twice as long as wide, moderately convex, finely striate, striæ with rather fine punctures not closely placed; intervals flat, densely scaly and with a row of moderately long erect hairs on each interval. Body beneath densely scaly, and with very short setæ sparsely placed. Legs densely scaly, scales cinereous, femora with a darker ring near the tip. Length .20–.28 inch; 5–7 mm.

The scales covering the body vary in color from cinereous to ochreous; on the thorax is a broad median stripe of darker color, and the elytra have short brownish lines on the discal space, occupying alternate intervals.

Occurs in Arizona and parts of California adjacent.

THINOXENUS n. g.

Rostrum not longer than the head, robust, not narrower in front, above flat, tip feebly emarginate. Scrobes lateral, rather broadly open and with divergent sides, posteriorly very shallow and not attaining the eyes. Antennæ moderate, sub-terminal, scaly; scape very feebly arcuate, attaining the thoracic margin; funicle 7-jointed, slightly longer than the scape, joints 1–2 longer, the first longer than the second, joints 3–7 obconical; club small, elongate oval. Eyes small, round, not prominent. Thorax oval, slightly broader than long, truncate at apex and base. Scutellum indistinct. Elytra regularly oval. Intercoxal process broad, truncate; second segment not longer than the two following, separated from the first by an arcuate suture. Hind tibiæ scaly at tip, anterior and middle tibiæ indistinctly mucronate. Claws connate.

This genus is closely allied to the preceding, and has similar affinities;

differs in the form of the scape and the structure of the funicle. The scrobes are shorter and rather widely open and shallow posteriorly, and for a very short distance converge slightly above.

T. squalens, n. sp (*Trachyphlœus squalens* Lec. mss., see note under *Geod. incomptus*).

Form oval, densely clothed with brownish scales and with short black setæ. Head and rostrum slightly longer than the thorax, densely scaly, sparsely punctured and setose. Thorax one-fourth broader than long, apex truncate, base feebly arcuate, sides rather strongly arcuate, disc moderately convex, densely scaly, sparsely punctured and setose. Elytra one and a half times as long as wide, regularly oval, disc moderately convex, indistinctly striate, striæ not closely punctured, intervals flat, densely scaly, each with two rows of short setæ. Body beneath and legs densely scaly, sparsely setose. Length .18 inch ; 4.5 mm.

Similar in form to *Eu. vagans* but less elongate. In addition to the scales, the surface is covered with an exudation which almost entirely obliterates the appearance of the scales.

Not rare near the sea coast of California.

RHYPODES n. g.

Rostrum short, as broad as long, sub-quadrangular, flattened above, tip slightly emarginate. Scrobes lateral, moderately deep, very feebly arcuate and passing directly to the eyes. Antennæ moderate, sub-terminal, scaly; scape feebly arcuate, attaining the margin of the thorax ; funicle 7-jointed, shorter than the scape, joints 1–2 longer, the first longer than the second; joints 3-7 obconical, short; club oval, acuminate. Eyes small, round, deeply inserted, scarcely visible from above, and coarsely granulated. Thorax transversely oval. Scutellum invisible. Elytra regularly oval, humeri oblique. Intercoxal process broad, truncate. Tibiæ not mucronate, the posterior scaly at tip. Claws connate at base, divergent at tip, especially the anterior. Body densely scaly and with erect scales.

The form of the species of this genus is exactly that of *Trachyphlœus*. It differs from the preceding genus in the form of the scrobes, and from *Eucyllus* by its shorter form, and the structure of the antennæ. The eyes are so feebly prominent and the orbital groove so well defined, that the eyes are scarcely at all visible from above.

Rh. dilatatus, n. sp (*Trachyphlœus id.* Lec. mss. See note under *Geod. incomptus*).

Form of *Trachyphlœus*, densely covered with brownish scales with paler spots and with erect scales sparsely placed. Head and rostrum slightly longer than the thorax, densely scaly, sparsely punctured and with erect scales. Thorax nearly twice as wide as long, truncate at apex, base feebly, sides strongly arcuate, disc moderately convex, covered with brownish scales, variegated with paler, and with erect, short, clavate scales, sparsely placed, surface sparsely punctured. Elytra regularly oval, finely striate, striæ not closely punctured, intervals flat, densely covered with brown and paler scales intermixed, each interval with two rows of not closely placed clavate scales. Body beneath and legs densely covered with brownish scales, the legs with semi-erect broad, paler scales. Length .14 inch; 3.5 mm.

Occurs near the sea coast at San Diego, Cal.

Rh. brevicollis, n. sp.

Form oval, robust, densely covered with dark cinereous scales, and with erect scales sparsely placed. Head and rostrum as long as the thorax, densely scaly, with sparsely placed erect scales, and sparsely punctured. Thorax more than twice as wide as long, apex truncate, base feebly, sides strongly arcuate, disc moderately convex, sparsely punctured, densely scaly, a broad median space brownish, sides cinereous. Elytra broadly oval, scarcely longer than wide, sides broadly arcuate, disc moderately convex, finely striate, striæ finely punctured, intervals flat, densely covered with dark cinereous scales, each interval with a row of erect clavate scales. Body beneath more sparsely scaly than above. Length .10 inch; 2.5 mm.

This species is much shorter and more robust than the preceding; the scaly vestiture is paler, and the body beneath less densely covered. The surface color when deprived of scales is pale castaneous.

One specimen from Colorado.

Group IV. TRACHYPHLŒI.

Antennæ moderate, scape attaining at most the margin of the thorax, usually the posterior margin of the eyes; funicle 7-jointed, joints 1–2 longer than the others, joints 3–7 moniliform; club short, oval. Claws free.

Although composed of species differing considerably in their general aspect from those of the preceding group, no sharply-defined characters are found by which to distinguish the two. The antennæ are always less elongate, the scape long, feebly arcuate and slightly thicker to the tip, attains the thorax; the funicle not longer than the scape, has the outer joints short, round and moniliform.

The following genera occur in our fauna:

Metathoracic side pieces entirely concealed; eyes with distinct orbital groove.
Scrobes superior, very short and deep not reaching the eyes; anterior and middle tibiæ feebly mucronate.................................. CERCOPEUS.
Scrobes lateral, long, passing directly backwards and enclosing the eyes; tibiæ strongly mucronate.......... .... CHÆTECHUS.
Metathoracic side pieces visible; suture at least moderately distinct.
Eyes with distinct orbital groove; rostrum deeply transversely impressed at base.. ..TRACHYPHLŒUS.

CERCOPEUS Schönh.

Cercopeus Schönherr, Gen. Curc. vii, 1, p. 154.

Rostrum slightly longer and narrower than the head, feebly arcuate, angulate, truncate at tip. Scrobes superior, very short, deep. Antennæ subterminal, scape feebly arcuate attaining the thorax, funicle 7-jointed, joints 1–2 longer, the first stouter, joints 3–7 short moniliform, club moderate, oval. Eyes small rounded, surrounded by a very distinct groove. Thorax transversely oval, broadly arcuate on the sides, apex and base truncate. Elytra oval, very slightly attenuate behind, humeri broadly rounded. Tibiæ mucronate, the anterior more strongly. Claws free.

The deciduous pieces of the mandibles are cylindrical, flattened and very obtuse at tip. The scar left after the separation is extremely feeble.

C. chrysorrhœus Say (*Peritelus*) Curc., p. 13; Am. Ent. i. p. 274; Boh. Sch. Gen. Curc., ii, p. 517.

Form oval, color brownish, densely covered with ochreous scales, elytra with large discal space; somewhat cordiform in shape, darker in color. Head and rostrum moderately densely punctured. Thorax transversely oval, somewhat broader than long, apex and base truncate, sides rather strongly arcuate, disc moderately convex, densely punctured, becoming at times strigose at the middle, surface sparsely scaly. Elytra oval slightly attenuate behind, humeri broadly rounded, striate, striæ punctured, intervals flat, densely scaly and uniseriately setigerous. Body beneath very sparsely scaly. Legs sparsely scaly and slightly hairy. Length .12–.20 inch; 3–5 mm.

Variable in the color of the scales covering the surface from luteous to brown but always showing the darker, discal spot on the elytra.

Occurs from Pennsylvania to Georgia.

CHÆTECHUS n. g.

Rostrum not longer than the head and as stout, parallel, quadrangular, tip truncate and with small smooth triangular space. Scrobes lateral moderately deep, sides divergent passing above and beneath the eyes. Eyes small, round and with distinct orbital groove. Antennæ stout, insertion sub-median, scape moderately robust, feebly arcuate, attaining the margin of thorax, funicle 7-jointed, the first two longer and the first much stouter, joints 3–7 moniliform, club oval. Thorax feebly transversely oval. Elytra oblong oval, sides at middle parallel. Scutellum indistinct. Second segment of abdomen longer than either of the two following, separated from the first by a feebly arcuate suture. Intercoxal process of first segment very broad and short. Tibiæ strongly mucronate at tip. Claws free.

This genus is very distinct from all the other *Trachyphlæi* by the characters above given although not without considerable affinity with both *Trachyphlæus* and *Cathormiocerus*. The eyes are small, round, coarsely granulated, surrounded on all sides with a very distinct orbital groove. The scrobes are deep, pass directly backwards to the eye, the upper bounding ridge passing over the eye so that a slight fold is formed almost concealing the eyes from above. The tibiæ are all rather strongly mucronate. From both the above genera the present may be known by the form of the scrobes.

C. setiger, n. sp.

Form oval, color brownish, surface sparsely scaly, elytra with rows of clavate scale-like hairs on the intervals. Rostrum densely punctured and with an indistinct median line. Thorax oval, broader than long, sides moderately arcuate, apex and base truncate, disc moderately convex, densely punctured, a slight post-apical and short transverse impression slightly behind the middle, surface with sparse scale-like hairs. Elytra slightly emarginate at base. oval, sides parallel for a slight extent, humeri broadly rounded, surface striate, striæ with coarse punctures, intervals feebly convex and with a row of scale-like, clavate hairs. Body beneath dark brown, with few scales, coarsely but not densely punctured. Legs brown sparsely clothed with clavate hairs. Length (total) .10 inch; 2.5 mm.

This is the smallest species known in our fauna, with the mandibular scar. It may be readily known by its color, the clavate hairs, and the surface almost entirely deprived of scales.

This insect appears to be rare. Occurs in Massachusetts.

TRACHYPHLŒUS Germ.

Trachyphlœus Germ. Ins. Spec. Nov., p. 408.

Rostrum as long as the head, stout, sub-quadrangular, slightly arcuate and with deep transverse impression at base, feebly emarginate in front and with a triangular elevated line in front of which is a smooth space. Scrobes lateral, deep, moderately arcuate and passing directly backward to the eye. Antennæ sub-median, moderate, scape attaining the margin of the thorax, moderately clavate, funicle 7-jointed, first joint longest and robust, second slender, joints 3–7 short, as broad as long, becoming gradually broader outwardly; club oval. Eyes small, round, lateral, coarsely granulated and with a distinct orbital groove. Thorax transversely oval. Elytra oval. Scutellum not visible. Metathoracic side pieces moderate, suture distinct in its entire length. Metasternum short. Intercoxal process of abdomen broad, truncate; second abdominal segment not as long as the two following united, separated from the first by a nearly straight suture. Middle and hind tibiæ not mucronate, anterior tibiæ mucronate and with four or five tooth-like spines around the apical margin. Claws free.

This genus differs by very marked characters from those which precede. In the latter the side pieces of the metasternum are entirely concealed by the elytra. In this the eyes are surrounded by a distinct orbital groove and are small, scarcely prominent and coarsely granulated. The rather deep transverse impression at the base of the rostrum, together with the convexity of the rostrum below this (owing to its being slightly arcuate) give this insect a very peculiar facies.

T. asperatus Boh. Sch. Gen. Curc. viii, 1, p. 116.

Form oval, moderately robust, densely covered with a pale ochreous coating indistinctly scaly, variegated on the elytra with brownish spots. Head and rostrum slightly longer than the thorax, the rostrum with a deep, broad, transverse impression at base beneath which the rostrum is strongly convex, surface densely coated, and with clavate scale-like hairs sparsely placed. Thorax transversely oval, nearly twice as long as wide, apex truncate, base feebly arcuate, sides strongly arcuate and very slightly constricted near the tip; surface moderately convex (sculpture indistinct) densely covered with pale brownish coating, median line and sides paler, and with sparsely placed erect, scale-like clavate hairs. Elytra oval, sides very feebly arcuate, apex obtuse, base feebly emarginate, humeri slightly oblique, surface distinctly striate, intervals flat, densely covered with pale ochreous coating variegated with brownish spots and with the clavate scale-like hairs arranged uniseriately on the intervals. Body beneath and legs densely coated, the latter with short bristly hairs. Length .12 inch; 3 mm.

One specimen from the Middle States.

Tribe IV. DIROTOGNATHINI.

Rostrum longer than the head, slightly flattened. Mandibles rather prominent. Mentum very small, trapezoidal, not retracted, maxillæ and ligula entirely exposed. Thorax with feeble ocular lobes. Metasternal side pieces narrow connate with the sternum, with very slight traces of suture.

These few characters serve to distinguish this tribe as represented in our fauna, to which may be added: Mandibles prominent, laminiform at tip, inner edge strongly bi-dentate, outer edge arcuate, with a groove and a scar-like space near the base, apex truncate, scar terminal, small, very narrow and transverse, deciduous pieces short, broader at tip and obliquely truncate. Mentum very small, supported by a distinct peduncle which is rather short. Metasternum rather short.

I am entirely unable to place this tribe in or near any of those indicated by Lacordaire, further than to state that it is *Phanerognath Synmeride* and belongs to the first section of the latter Phalanx.

One genus occurs in our fauna.

DIROTOGNATHUS n. g.

Rostrum longer than the head, slightly broader in front and somewhat flattened, straight, tip truncate. Scrobes lateral feebly arcuate, very indistinctly defined, rapidly wider and evanescent. Antennæ moderate, scape gradually thicker, attaining the posterior margin of the eyes, funicle 7-jointed, first two joints longer, the first longer than the second, 3–7 short broader than long, sub-moniliform, club elongate oval. Eyes broadly oval, coarsely granulated. Thorax with distinct but feeble ocular lobes which are fimbriate. Scutellum invisible. Elytra oval, base feebly emarginate. Metasternum short, side pieces narrow, connate, with scarcely any traces of suture. Intercoxal process broad, truncate, second segment of abdomen much longer than the two following together, separated from the first by a strongly arcuate suture. Tibiæ feebly mucronate, corbels of hind tibiæ open. Body scaly and with short black hairs.

D. sordidus, n. sp.

Form oval, robust, surface moderately densely covered with dark cinereous scales, discolored dark-brown by exudation, and with very short dark-brown hairs. Head and rostrum as long as the thorax, densely scaly, and with few short hairs. Thorax oval, broader than long, slightly narrower in front, sides regularly arcuate from apex to base, apex truncate, base feebly arcuate, disc convex, densely punctured and scaly, scales imbricated, paler in color along the median line and sides, and with very short dark-brown hairs sparsely placed. Elytra broadly oval, broader at base than the thorax, very feebly emarginate at middle, humeri broadly rounded, disc convex, finely striate, striæ not punctured, intervals flat, densely scaly, each interval with two rows of very short, black, semi-erect hairs. Body beneath and legs less densely scaly and very sparsely hairy, tibiæ sparsely fimbriate within. Length .16–.24 inch; 4–6 mm.

This insect resembles in form and size *Phyxelis rigidus*. The color varies in accordance with the exudation, some being very dark cinereous, others very dark-brown. The males are slightly more elongate than the females, and the sides of the elytra less arcuate.

Occurs very abundantly in the desert regions of Arizona under damp logs, and was also collected by Mr. Crotch at Frot Mojave, California.

DIVISION II.

In this division are contained all those genera in which the mesosternal side pieces are diagonally divided into two nearly equal pieces, the outer of which (epimeron) cuts off the inner (episternum) from any contact with the elytral margin. The metasternal episternum is usually moderately broad, the suture distinct in its entire length, rarely narrow, and in one genus the suture is entirely obliterated. In every case, however, the anterior end of the metasternal episternum is suddenly dilated, causing on one side an emargination of the elytral margin (which is, however, evanescent), while on the inner side an acute triangular process of varying length occupies a space between the mesosternal epimeron and the body of the metasternum.

The antennal scrobes vary in form, position and extent. The mentum is, in all of our genera, at least moderate and visible, excepting *Eudiagogus* and *Coleocerus* where it is small and much retracted, allowing the parts of the mouth to be visible. The beak at tip exhibits two distinct forms. In the one the genæ are rather deeply notched and allow the base of the mandible to be exposed; in the other there is no emargination or a very feeble one. Accompanying these latter characters we have the upper portion of the beak more prolonged over the mandibles above in the former case, while in the latter the mandibles are always greatly exposed above. A lateral view of the beak will therefore show the tip to be obliquely truncate in those with the emarginate genæ, and squarely truncate in the other case.

The scar of the deciduous mandibular cusp is very distinct in all the genera excepting *Coleocerus*, and is usually on the face of the mandible, although in some genera at the summit of an obtuse process.

The tribes forming this division are shown in the following table :

Mentum moderate, rarely small, never retracted; sub-mentum not notched at middle ; thorax rarely (*Pachnæus*) with feeble ocular lobes. Eyes round.
Thorax fimbriate at the sides behind the eyes. Striæ entire.. **TANYMECINI.**
Thorax not fimbriate at the sides behind the eyes.
Genæ emarginate behind the mandibles.
Rostrum short, robust; tenth striæ confluent with the ninth ; claws free, except in *Aphrastus*.......................... **CYPHINI.**
Genæ not or very feebly emarginate ; tenth striæ free.
Rostrum at least moderately elongate, scrobes long ; claws free ; head not prolonged behind the eyes ; articular surfaces of hind tibiæ cavernous. Mentum large.................................... **EXOPHTHALMINI.**
Rostrum rather short, scrobes short ; head prolonged behind the eyes ; claws connate ; articular surfaces of hind tibiæ open. Mentum small............ **PHYLLOBIINI.**
Mentum small, retracted ; thorax with large ocular lobes. Eyes transversely oval......... **PROMECOPINI.**

The partial obliteration of the marginal stria occurs in but one tribe, in the others that stria is entire and nearly equally distant from the preceding throughout. The mentum attains the minimum in the last two groups.

Tribe I. TANYMECINI.

Rostrum moderate, sub-angulate, sub-parallel, more or less emarginate at tip and at the sides. Scrobes moderately deep, arcuate, passing beneath the eyes. Antennæ moderate, scape moderately long, usually attaining the hind margin of the eye, sometimes attaining the thorax. Thorax with a short row of bristly hairs behind the eyes (and in *Pachnæus* very feebly lobed). Scutellum distinct. Metasternum moderately long. Second segment of abdomen longer than the third and fourth together, and separated from the first by an arcuate suture. Articular cavities of hind tibia variable. Claws free. As represented in our fauna, this tribe does not differ from the group indicated by Lacordaire, except in the addition of *Pandeletejus*.

Our genera are as follows :

Anterior coxæ contiguous.
  Thorax feebly lobed behind the eyes, (the latter transversely oval, pointed beneath) and bisinuate at base.............................. **PACHNÆUS.**
  Thorax not lobed, base truncate, eyes round, or longitudinally oval.
    Anterior femora normal, the tibiæ simple... **TANYMECUS.**
    Anterior femora much longer and stouter than the others, the tibiæ denticulate within.. **HADROMERUS.**
Anterior coxæ distant.
    Anterior femora larger than the others... **PANDELETEJUS.**

The articular cavities of the hind tibiæ vary in the genera. They are feebly enclosed in *Pachnæus*, more decidedly in *Tanymecus*, and entirely open in the other two genera. Into this tribe *Polydacris modestus* of Cuba should enter. It has very distinct vibrissæ composed of scales, and the anterior coxæ are separated as in *Pandeletejus*. The tribe as thus constituted is not very homogeneous, and with more genera would divide into well defined groups, each of the above genera constituting a type. With our few genera this appears unnecessary.

PACHNÆUS Sch.

Pachnæus Schönh. Curc. Disp. Meth. p. 121.

Rostrum as long as the head, sub-quadrangular, slightly declivous at tip and emarginate, above obtusely carinate. Scrobes lateral, deep, well defined, narrow, arcuate and passing directly beneath the eyes. Antennæ sub-median, moderate ; scape gradually clavate, attaining the posterior margin of the eyes ; funicle 7-jointed, first two joints longer, the second somewhat longer than the first, joints 3–7 sub-equal ; club oval, pointed. Eyes oval, narrower beneath. Thorax broader than long, narrower in front, apex slightly prolonged, base bisinuate. Scutellum moderate rounded. Elytra oblong oval, each acute at tip, base bisinuate and wider than the thorax, humeri oblique. Intercoxal process broad, arcuate at tip; second abdominal segment as long as the two following, separated from the first by a strongly arcuate suture. Tibiæ finely mucronate at tip. Posterior corbels very feebly cavernous. The slight process at the side of the thorax behind the eyes scarcely warrants the name of ocular lobe. The vibrissæ are, however, well marked. The genæ are extremely feebly emarginate.

P. opalus Oliv. (*Curculio*) Ent. v, 83, p. 339, pl. 24, fig. 345 ; Boh. Sch. Gen. Curc. vi, 1, p. 425.

Form oblong, oval, densely covered with pale-blue scales with a faint cupreous lustre. Body winged. Head sparsely punctured, densely scaly. Thorax broader at base than long, narrower in front, sides moderately arcuate, apex faintly lobed, base bisinuate, disc moderately convex, median line feebly impressed; surface densely scaly, median line and sides paler. Elytra densely scaly and with twelve rows of moderate punctures, the ninth somewhat confused, intervals indistinctly biseriately punctulate. Body beneath densely scaly, scales larger and paler than above. Legs densely scaly, tibiæ with short hairs on the inner side. Length .40 inch: 10 mm.

Occurs in Florida, and is not rare.

The base of the elytra is not only bisinuate, but there is also a small dentiform prominence contiguous to the thoracic hind angles. Lacordaire mentions this character for two Cuban species, but not for our own.

P. distans, n. sp.

Form elongate oval, densely covered with pale bluish white scales, with faint cupreous lustre. Head and rostrum slightly longer than the thorax, densely scaly. Rostrum with a fine median elevated line, ending in a frontal puncture. Thorax broader than long, slightly narrower in front, sides feebly arcuate, base feebly bisinuate, disc moderately convex, with large, deep punctures irregularly placed, densely scaly. Scutellum oval, truncate at base. Elytra oblong, sides feebly arcuate, base very feebly bisinuate, humeri not dentiform in front, convex, densely scaly and with twelve rows of coarse and moderately deep punctures, intervals flat, with a single row of minute punctures, each bearing a longer scale. Body beneath and legs densely scaly, and with minute scale-like hairs. Length .32 inch; 8 mm.

Notwithstanding the fact that the elytra are not prominent at the middle of the base of each, I am unwilling to separate this species under a distinct generic name. In the generic table of the *Tanymecides*, Lacordaire assigns strongly cavernous corbels to *Pachnæus*. This is not so in either of our species, the posterior tibiæ having at their tips merely the double row of bristles very feebly separated. The form of the eyes appears to be a character of greater value in the arrangement of the genera of this group, after the form of the tarsi, than any that is made use of by Lacordaire. Too much importance seems to have been given to the form of the base of the elytra, and it will be found that exceptions are met with frequently in many genera.

The species above described was collected at Cedar Keys and Capron, Florida, by Messrs. Schwartz and Hubbard.

TANYMECUS Sch.

Tanymecus Schönh. Curc. Disp. Meth. p. 127.

Rostrum as long as the head, stout, sub-parallel, sub-quadrangular, above flattened, tips either truncate or feebly emarginate. Scrobes deep, feebly arcuate, passing immediately beneath the eyes. Eyes oval, moderately prominent, slightly longitudinal. Antennæ anterior moderately long; scape gradually clavate, attaining the posterior margin of the eyes (*confusus*) or the margin of the thorax (*lacæna*); funicle 7-jointed, joints 1–2 longer, sub-equal, 3–7 obconical, gradually shorter, club elongate oval. Thorax sub-cylindrical, longer than wide, with a distinct line of bristly hairs behind the eyes. Scutellum small, triangular. Elytra elongate, oval, wider at base than the thorax, marginal stria distinct. Metasternum long or moderate. Intercoxal process moderate, arcuate in front; second segment of abdomen longer than the two following, separated from the first by a feebly arcuate suture. Anterior and middle tibiæ feebly denticulate within, and with feeble mucro at tip. Articular cavities of hind tibiæ open, ascending and limited by an acute ridge with fine spinules on the posterior edge. Claws free. Surface densely scaly.

The species known to occur in our fanua are two, distinguished as follows:

Rostrum feebly emarginate at tip, not carinate above; scape attaining the margin of the thorax; elytra finely striate with moderate punctures; form dissimilar ♂ and ♀ .... **lacæna.**

Rostrum truncate at tip, very distinctly but finely carinate above; scape attaining the posterior margin of the eyes; elytra similar in form in the sexes and with rows of large deep punctures................ **confertus.**

T. lacæna Hbst. (*Curculio*) Käfer vii, p. 35, pl. 100, fig. 10; Fahrs. Sch. Gen. Curc. vi, 1, p. 232; *leucophæus* ♂ Gyll. loc. cit. ii, p. 78; *canescens* ♀ Gyll. loc. cit. p. 85.

Form oblong, oval, surface densely covered with cinereous scales. Head and rostrum nearly as long as the thorax, moderately, densely punctured, *and rather sparsely clothed with rather elongate scales*. Thorax sub-cylindrical, slightly longer than wide, slightly narrower in front, sides moderately arcuate, disc moderately convex, densely punctured, moderately, densely scaly, scales cinereous, with slight cupreous tinge, a badly-defined darker line at the sides. Elytra oblong, oval, (longer and slightly dehiscent at tip in male) sides feebly arcuate and gradually attenuate to tip, humeri obtusely rounded; disc moderately convex, feebly striate, striæ with moderate punctures, not closely placed, surface moderately densely covered with cinereous scales, each alternate interval at base slightly darker. Body beneath and legs moderately densely scaly. Length .32 ♀ - 36 ♂; 8–9 mm.

Occurs in Georgia and Florida.

T. confertus Gyll. Sch. Gen. Curc. ii, p. 88; *confusus* Say, Descr. Curc. p. 9; Am. Ent. 1, p. 269.

Head and rostrum nearly as long as the thorax, sparsely scaly, more densely over the eyes, surface densely punctured, rostrum feebly sub-carinate. Thorax cylindrical, slightly narrowed in front, sides in front slightly arcuate, posteriorly sub-parallel, disc moderately convex, densely punctured, sparsely scaly. Scutellum white. Elytra oblong, sides subparallel, disc moderately convex, obsoletely striate and with coarse, deep, moderately closely placed punctures, gradually becoming smaller to tip; surface moderately, densely covered with cinereous scales, irregularly mottled with brown. Body beneath and legs moderately densely scaly. Length .20–.28 inch ; 5–7 mm.

The thorax has a median and lateral space partially deprived of scales, giving the surface a vittate appearance. In specimens from the Southern States, the scales become more or less cupreous, and the specimens are usually larger.

Occurs everywhere east of the Rocky Mountains.

HADROMERUS Sch.

Hadromerus Schönh. Curc. Disp. Meth. p. 136.

Rostrum as long and nearly as wide as the head, sub-quadrangular, above flat, finely canaliculate, emarginate at tip and with a narrow triangular smooth space, deeply triangularly notched at the sides. Scrobes moderately deep, well defined, arcuate, passing downwards at a distance from the eyes. Antennæ moderate, scape gradually clavate, attaining nearly the posterior margin of the eye ; funicle 7-jointed, joints 1–2 elongate, 3–7 obconical ; club elongate, oval. Eyes large, round, moderately prominent. Thorax sub-globose, truncate at apex and base. Scutellum triangular. Elytra wider at base than the thorax, moderately elongate, parallel, obtusely acuminate posteriorly ; humeri moderately prominent. Metasternum moderately elongate. Intercoxal process broad, oval at tip ; second abdominal segment longer than the two following together, separated from the first by a moderately arcuate suture. Anterior legs longer, the femora stouter than the others, the tibiæ of the same pair denticulate within, and obtusely mucronate. Articular surface of hind tibiæ open, glabrous. Claws free. Body densely scaly.

H. opalinus, n. sp.

Form moderately elongate, densely covered with bright-blue scales with greenish and golden reflections, and with short, fine, yellowish setæ very sparsely placed. Head and rostrum (and mandibles) densely scaly, sparsely punctured, together as long as the thorax. Thorax sub-globose, truncate at apex and base, slightly broader than long, surface densely scaly, sparsely punctate. Elytra oblong, parallel, base feebly emarginate, surface densely scaly, finely striate, striæ finely and closely punctured, intervals flat, and with a single series of setæ on each. Body beneath as above ; tibiæ rufous, femora darker, anterior femora piceous. Length .32 inch ; 8 mm.

This species is the most brilliant and more decidedly tropical in its appearance of any in the family in our fauna.

Occurs in Arizona. C. V. Riley.

PANDELETEJUS Sch.

Pandeleteius Schönh. Curc. ii, p. 129.

Rostrum not as long as the head, slightly compressed, quadrangular, slightly grooved above, tip entire and without smooth space or feebly emarginate with small smooth space. Vertex feebly convex. Scrobes lateral, moderately deep, well defined, slightly arcuate and passing immediately beneath the eyes. Eyes small, slightly oval. Antennæ moderate, slender, scape gradually clavate, attaining nearly the posterior margin of the eyes; funicle with joints 1–2 elongate, 3–7 very short, moniliform; club elongate oval. Thorax cylindrical, broader than long, with sides arcuate, apex obliquely, base squarely truncate. Scutellum small, triangular. Elytra wider at base than the thorax, humeri moderately prominent, form oblong. Intercoxal process moderately broad, oval at tip. Second abdominal segment longer than the two following together, separated from the first by a feebly arcuate suture. Anterior legs longer than the others, their femora stouter, and their tibiæ denticulate within. Articular surface of hind tibiæ terminal, not cavernous. Body winged, surface densely scaly.

Lacordaire places this genus among the Naupactides, having entirely overlooked the fimbriæ at the side of the thorax behind the eyes. No mention is made of the separation of the anterior coxæ. As has been already mentioned *Polydœris* is closely related to *Pandeletejus;* the anterior coxæ are in it also separated, and the sides of the thorax have distinct vibrissæ composed, however, of scales. I think these two genera should make but one.

Two species occur in our fauna:

Tip of rostrum entire, without smooth space.................. **hilaris.**
Tip of rostrum emarginate, with smooth space............... **cinereus.**

These two differ also in the form of the thorax. In the latter, the thorax is dilated only at the middle, so that the cylindrical portions in front and behind the dilatation are equal. In the former, the dilatation is pyriform, and the anterior narrower part much shorter than the posterior.

P. hilaris Hbst. (*Curculio*) Käfer, vii, p. 58, pl. 100, fig. 7–8; (*Hadromerus*) Say, Descr. Curc. p. 10; *pauperculus* Gyll. Schönh. Gen. Curc. ii, p. 130.

Form moderately elongate, densely covered with cinereous scales, disc of elytra darker and with an oblique median fascia entering the darker space. Rostrum nearly squarely truncate at tip, and without smooth space, surface densely scaly, sparsely punctured. Thorax longer than wide, cylindrical, sides dilated, and broader behind the middle, anteriorly with a cylindrical constriction, posteriorly with shorter constriction; disc moderately convex, densely and coarsely punctured, densely covered with cinereous scales, a broad median line and the sides darker. Elytra truncate at base, oblong, broadest behind the middle; ten-striate, striæ closely punctured, intervals slightly convex, surface densely scaly. Body beneath densely scaly, scales with pearly lustre. Legs with cinereous scales, indistinctly annulate with darker; tibiæ slightly hairy within. Length .16–.20 inch. 4–5 mm.

This species occurs rather abundantly from New York to Texas.

P. cinereus, n. sp.

This species resembles the preceding in form and color. It is, however, generally smaller, paler in color and differs especially in the following manner:

Rostrum distinctly emarginate at tip and with narrow crescentic smooth space. Thorax cylindrical, dilated at middle, on both sides of which it is equally cylindrically constricted. Body beneath sparsely covered with paler scales, without lustre. Length .14–.18 inch; 3.5–4.5 mm.

Occurs rather abundantly in Texas.

The sexual differences are not well marked. The anterior coxæ appear to be more widely distant in the male than in the female, and in the second species the same coxæ are more distant sex by sex than in the preceding.

Tribe II. CYPHINI.

Rostrum robust, deeply emarginate at tip and sides. Scrobes variable. Antennæ moderate, second joint of funicle longer than the first, rarely (*Aphrastus*) equal to it. Thorax without ocular lobes or fimbriæ. Claws free except in *Aphrastus*. Articular surface of hind tibiæ internal and cavernous except in *Aphrastus*, usually glabrous, rarely scaly. Elytra with the outer stria confluent with the next inner at one-third from the base. Metasternum moderately long.

The rostrum is always acutely emarginate in front and at the sides, and in all our genera there is a fine median groove. The supports of the deciduous pieces are usually very prominent, and the deciduous pieces are (as far as seen) elongate, glabrous, falciform and acute at tip.

The following groups may be recognized:

Claws free; articular surfaces of hind tibiæ cavernous.
  Elytra wider at base than the thorax, humeri prominent.... **Cyphi.**
  Elytra oval, not wider at base than the thorax, humeri rounded.. **Artipi.**
Claws connate; articular surfaces of hind tibiæ not cavernous.
  Elytra oval, humeri rounded, body apterous..................... **Aphrasti.**

Group I. Cyphi.

Humeri prominent, elytra wider at base, wider than the thorax. Scutellum distinct. Body winged.

Our genera are few in number and may be distinguished as follows:

Articular surface of hind tibiæ scaly. Scape passing the eyes.. **COMPSUS.**
Articular surface of hind tibiæ glabrous. Scape not passing the eyes.

Scape moderate, scrobes long, passing beneath the eyes. Scutellum small, triangular............... **CYPHUS.**

Scape short, stout, scrobes short, suddenly arcuate. Scutellum rather large, oval...............**BRACHYSTYLUS.**

Brachystylus has been placed by Lacordaire among the *Otiorhynchini*, but the entire structure is that of the *Cyphini*, notwithstanding the slight irregularity in the form of the scrobes.

COMPSUS Sch.

Compsus Schönh. Curc. Disp. Meth., p. 109.

Rostrum as long as the head, slightly dilated at tip which is deeply emarginate above and at the sides, above finely sulcate and with a broad triangular impression at apex. Supports of deciduous pieces prominent. Scrobes deep, shallower behind, moderately arcuate and terminating above the inferior edge of the eye. Eyes oval, sub-acute beneath. Antennæ moderately long, sub-apical, scape long, passing the eyes behind, feebly clavate; funicle 7-jointed, joints 1–2 longer, the second longer than the first, joints 3–7 nearly cylindrical, feebly decreasing in length; club elongate oval. Thorax broader than long, narrower in front, truncate at apex, bisinuate at base. Scutellum rounded. Elytra oblong, wider than the thorax, humeri prominent. Anterior tibiæ moderately, middle tibiæ feebly mucronate; articular surface of hind tibiæ cavernous, densely scaly. Intercoxal process rounded at tip, broad. Second abdominal segment longer than the third and fourth together, and separated from the first by a strongly arcuate suture. Body densely scaly.

C. auricephalus Say (*Curculio*), Journ. Acad., 1823, p. 310; Boh. Sch. Gen. Curc. i, p. 645; *auripes* Sch. Gen. Curc. vi, 1, p. 183.

Form elongate, somewhat navicular, surface densely covered with scales varying in color from white to greenish-white. Head and rostrum longer than the thorax, sparsely punctured, densely covered with scales varying in color from white to pale cupreous. Antennæ scaly. Thorax wider at base than long, apex truncate, base bisinuate, sides moderately arcuate and converging in front, disc moderately convex with broad median groove wider behind, limited on each side by an obtuse ridge, surface sparsely punctured, densely scaly. Elytra more than twice as wide as long, slightly wider behind the middle, and feebly acuminate at tip, disc moderately convex, feebly striate, striæ with large distant punctures, alternate intervals sub-costiform, surface densely scaly and with very short scale-like hairs on the costiform intervals. Body beneath and legs densely scaly and with short setæ. Length .36–.48 inch; 9–12 mm.

The color of the scales covering the body varies from white to pale green. In the latter case the upper side of the head and the outer side of the legs are pale cupreous.

Occurs rather abundantly from Georgia to Mexico, also to the north in Colorado.

CYPHUS Germ.

Cyphus Germ. Ins. Spec. nov., p. 427.

Rostrum not longer than the head, robust, quadrangular, slightly narrower in front, tip and genæ deeply emarginate, above sulcate. Scrobes lateral deep, well-defined, arcuate and passing directly beneath the eyes. Eyes round, moderately prominent, finely granulated. Antennæ moderate; scape feebly clavate, attaining the middle of the eye; funicle 7-jointed, joint 2 longer than the first, 3–7 sub-equal, slightly obconical; club elongate oval. Thorax broader than long, narrower in front, apex truncate, base bisinuate. Scutellum small triangular. Elytra wider at base than the thorax, humeri moderately prominent, rather more than twice as long as wide, and at apex slightly acuminate. Metasternum moderately long. Intercoxal process broad, sub-truncate. Second abdominal segment as long as the two following united, separated from the first by a feebly arcuate suture. Articular surface of hind tibiæ enclosed (cavernous), and ascending. Anterior and middle tibiæ feebly mucronate. Body densely scaly.

The middle and hind tibiæ have the articular surfaces ascending one-third the length of the tibiæ, the edge being sharp and fimbriate with bristly hairs. The surfaces are however entirely glabrous. In addition to the differences in the number of the dorsal segments of the sexes, the females may be known by an additional character. On each side of the last segment, is a short, rather deeply-impressed line, parallel with the lateral margin and about one-fourth the width of the segment from the side, beginning at the last ventral suture and extending nearly half the length of the segment. The last ventral of the male is not so marked, and is rather longer than in the female.

Two species occur in our fauna.

Thorax abruptly narrowed in front, sides behind the front angles strongly arcuate. Anteriorly rather abruptly truncate	**lautus.**
Thorax gradually narrowed from base, sides feebly arcuate. Apex very obliquely truncate, with the upper margin decidedly prolonged over the occiput	**placidus.**

The differences between these two species are more appreciable in nature than expressible by words. The punctures of the striæ are much finer in *placidus* than in *lautus*.

C. lautus Lec. (*Tanymecus*) Proc. Acad., 1854, p. 85.

Form oblong, robust, densely scaly. Head and rostrum slightly longer than the thorax. Rostrum trisulcate, median sulcus moderately deep and extending to the occiput, lateral sulci short, slightly oblique, surface sparsely punctured, moderately densely scaly. Thorax broader than long, subquadrate, sides in front strongly arcuate and rather suddenly narrowed, slightly sinuate before the hind angles, apex truncate, base bisinuate, hind angles slightly laminiform; disc moderately convex, a fine median line ending in a broad shallow fossa near the base, a short linear basal impression on each side near the hind angles; surface coarsely punctured with fine punctures intermixed, moderately densely scaly. Elytra wider at base than the thorax, and three times as long, humeri slightly oblique, sides parallel, apex slightly prolonged; disc moderately convex finely striate, striæ moderately coarsely punctured, intervals flat; surface moderately densely scaly, scales cinereous with a transverse fuscous spot on each elytron slightly in front of the middle and another smaller near the declivity. Body beneath moderately densely scaly; legs densely scaly, sparsely pilose, middle and hind femora with a fuscous spot near the tip. Body winged. Length .36–.52 inch; 9–13 mm.

var. lautus. Elytra moderately densely scaly, scales cinereous, with two fuscous spots on each elytron, the anterior slightly in front of the middle and formed of short lines of fuscous scales on the intervals 2 to 5 surrounded with paler cinereous scales, a similar spot on the beginning of the declivity composed of three short lines on intervals 2–3–4.

var. ————. Elytra uniformly covered with nearly white scales moderately densely placed.

This species occurs in Arizona, and has been distributed under the unpublished name *Brachythysus lautus.*

C. placidus, n. sp.

Oblong, more slender than *lautus.* Head somewhat narrower, median sulcus broader at middle. Thorax scarcely wider than long, gradually narrower from base to apex, sides feebly arcuate; apex obliquely truncate slightly prolonged over the head, base bisinuate, hind angles slightly laminiform; disc with broad shallow median fovea, and a feeble impression on each side near the base, surface sparsely punctured with finer punctures intermixed, very densely scaly especially in the median fovea. Elytra similar in form to *lautus* but rather longer in proportion to their width; disc moderately convex, finely striate, and with rather fine punctures rather distantly placed; surface very densely scaly. Body beneath very densely scaly and sparsely hairy. Legs densely scaly, tibiæ pilose. Length .48–.52 inch; 12–13 mm.

The two specimens before me, both females, vary in color. The larger is pale greenish-white, the other simply white. The scales are so densely placed as to entirely conceal the surface color. In this respect they differ notably from the preceding species. The more striking differences have already been pointed out.

Two specimens. Arizona.

BRACHYSTYLUS Sch.

Brachystylus Schönh. Gen. Curc. viii, 2, p. 433.

Rostrum horizontal, nearly as long and as broad as the head, deeply emarginate at tip (with narrow smooth space) and at the sides, above flat and with a fine median groove. Scrobes short, narrow in front, their lower border suddenly flexed and directed downwards. Eyes round, moderately prominent. Antennæ short, scaly; scape short, robust, obconical, passing slightly beyond the middle of the eye ; funicle 7-jointed, first joint short robust, second longer, joints 3–7 cylindrical, sub-equal ; club oval. Thorax conical, truncate at apex, feebly bisinuate at base. Scutellum oval, narrower at base. Elytra wider than the thorax, slightly wider behind the middle, apex sub-acuminate. Metasternum elongate. Intercoxal process moderate, oval at tip. Second abdominal segment very much longer than the two following combined, separated from the first by a strongly arcuate suture. Anterior and middle tibiæ mucronate ; articular surface of hind tibiæ enclosed (cavernous). Claws very small. Body densely scaly.

The affinities of this genus are so plainly with *Cyphus* that it is rather singular they should have been overlooked by Lacordaire.

B. acutus Say (*Chlorophanus*), Journ. Acad., 1824, p. 310 ; Curc. N. A., p. 7 ; Am. Ent. i, p. 266 ; Boh. Sch. Gen. Curc. viii, 2, p. 434.

Form oblong. Head and rostrum not as long as the thorax, sparsely punctured, very densely scaly. Thorax conical, slightly longer than wide at base, apex truncate, base feebly bisinuate, sides very feebly arcuate at middle ; disc slightly flattened, sparsely punctured, densely scaly. Elytra oblong, sub-acuminate at tip, base broader than the thorax, humeri prominent, sides very feebly arcuate, slightly divergent ; surface feebly striate, striæ with coarse punctures, intervals feebly and alternately more convex, densely scaly. Body beneath and legs densely scaly. Length .36 inch ; 9 mm.

The color of the scales covering the body is earthy brown, the tip of the elytra much paler and with a broad post-median dark brown fascia bordered anteriorly with paler. The tibiæ of both sexes are fimbriate within. The last abdominal segment is acutely triangular in the female, rounded in the male.

Occurs in Pennsylvania, Georgia, and Kentucky.

Group II. **Artipi.**

Elytra oval or oblong, not wider at base than the thorax, humeri oblique. or broadly rounded. Scutellum distinct. Antennæ long, scape passing the eyes behind. Articular surfaces of hind tibiæ cavernous. Rostrum rather deeply notched behind the base of the mandibles.

The essential difference between this group and the preceding is found in the form of the elytra. The antennæ (especially the scape), are longer and more slender. The rostrum varies in form and is usually short, stout, flattened above and deeply notched at tip. In one genus however the rostrum is decidedly Periteloid with less divergent alæ. All the genera excepting *Artipus* have the anterior tibiæ denticulate within.

Our genera are as follows :

Rostrum short, stout. Scrobes linear in front.
  Articular surface of hind tibiæ scaly ; anterior tibiæ not denticulate within........................ **ARTIPUS.**
  Articular surfaces of hind tibiæ glabrous ; anterior tibiæ more or less denticulate within.

Articular surfaces of hind tibiæ very feebly or not cavernous; tips of hind tibiæ with, at most, a double row of fimbriæ.................. **ARAMIGUS.**

Articular surfaces of hind tibiæ, strongly cavernous; tips of hind tibiæ with oval scaly space. **PHACEPHOLIS.**

Rostrum moderately elongate. Scrobes cavernous in front.

Articular surfaces of hind tibiæ sparsely scaly... **ACHRASTENUS.**

Artipus has a form somewhat resembling *Cyphus*, without however having the humeri prominent. The next two genera, especially *Aramigus* resemble an elongate *Strophosomus*. *Achrastenus* resembles *Peritelus*.

ARTIPUS Sch.

Artipus Schönh. Curc. Disp. Meth., p. 133.

Rostrum not longer than the head, robust, angles rounded, finely canaliculate above, and with a very shallow impression near the apex crossed by a feeble transverse ridge between the insertion of the antennæ, tip triangularly emarginate, and with a narrow smooth space; genæ deeply notched. Scrobes narrow in front and moderately deep, gradually broader and evanescent behind, the lower border strongly arcuate and directed inferiorly. Eyes oval, slightly longitudinal, moderately prominent. Antennæ subterminal, moderately long; scape feebly clavate and attaining the thorax; funicle 7-jointed, 1–2 longer, sub-equal, 3–7 shorter sub-equal; club oblong oval. Thorax cylindrical, slightly narrowed in front. Scutellum moderate, oval. Elytra oval, nearly twice as long as wide, not wider than the thorax, base sub-truncate, humeri feebly oblique. Metasternum moderately long. Intercoxal process of abdomen broad, rounded at tip; second segment longer than the two following, separated from the first by a strongly arcuate suture. Anterior and middle tibiæ mucronate. Articular surfaces of hind tibiæ scaly. Claws free. Body winged, surface densely scaly.

Not only are the hind tibiæ scaly at tip, but also the articular surfaces of the other tibiæ are partially encroached upon by scales, and those of the hind tibiæ are very feebly cavernous.

A. floridanus, n. sp.

Form oblong, surface densely clothed with white scales, varying to pale greenish blue with cupreous lustre. Head and rostrum not as long as the thorax, sparsely punctured and densely scaly. Thorax as wide as long, cylindrical, slightly narrower in front, sides very slightly arcuate, apex and base truncate, disc moderately convex, median line moderately impressed, interrupted, surface unevenly punctured, densely scaly. Elytra nearly twice as wide as long, broadest behind the middle, sides feebly arcuate, base sub-truncate, disc moderately convex, feebly striate, striæ with moderate but very unequal punctures not very closely placed, intervals nearly flat, each with two rows of short scale-like hairs, surface densely scaly, the larger punctures surrounded by a darker area. Body beneath and legs densely scaly and sparsely hairy. Length .24 inch; 6 mm.

On examining the anterior tibiæ with rather high power, minute denticulations may be detected. This species resembles one from Cuba (sent by Professor Poey, without name) which has the elytral intervals more convex, the punctures of the striæ, larger, more regular and closer and the thorax more densely punctured.

Several specimens from Key West, Florida.

ARAMIGUS n. g.

Rostrum slightly narrower than the head, very little longer and somewhat narrowed in front, tip triangularly emàrginate, genæ deeply notched. base of mandibles exposed, above finely grooved. Scrobes lateral, narrow in front, sides slightly divergent behind, arcuate and directed beneath the eyes. Eyes oval, longitudinal and prominent. Antennæ sub-median, long, slender; scape long, slender, rather suddenly clavate, attaining the thorax; funicle 7-jointed, longer than the scape, joints 1–2 longer, the second much longer than the first, joints 3–7 moderately long, sub-equal; club elongate oval. Thorax cylindrical, sides feebly arcuate. Scutellum either small or indistinct. Elytra oval, not wider than the thorax and truncate at base. Metasternum moderate. Intercoxal process of abdomen broad, truncate; second segment of abdomen longer than the two following united, separated from the first by an arcuate suture. Anterior femora stouter than the others, their tibiæ denticulate within and mucronate at tip. Hind tibiæ with the posterior edge at tip acute, margined with densely placed spinulose hairs. Articular cavities not or extremely feebly cavernous and ascending the tibiæ. Claws moderate, free. Body densely scaly.

This genus would probably belong to Lacordaire's *Brachyderides* and its position near *Eurymetopus*. The resemblance of the species to *Strophosomus* has already been noticed, and it may be remarked that *Eurymetopus* has also been so compared. I find, however, differences of sufficient importance in the descriptions to convince me that our species cannot be referred to any known genus.

Two species are known in our fauna:

Denticulation of anterior tibiæ indistinct; surface densely scaly.. **tesselatus.**
Denticulation very distinct; surface not densely covered... **Fulleri.**

The humeri of the first species are rectangular and slightly prominent anteriorly and in the latter obliterated. The articular surfaces of the middle tibiæ ascend nearly as much as in the hind tibiæ in *tesselatus*, and are not at all ascendent in *Fulleri*.

A. tesselatus Say, (*Liparus*) Journ. Acad. 1824, p. 318; *Strophosomus?* id. Mels. Cat. p. 97; *Ophryastes* id. Catalogus. Gemm. and Harold, p. 2317.

Form oblong, oval, surface densely scaly, of variable color. Head and rostrum as long as the thorax, densely scaly, except at apex, sparsely punctured. Thorax cylindrical, slightly narrowed in front, slightly broader than long, sides feebly arcuate, apex and base truncate, disc mode rately convex, finely punctured. densely scaly. Elytra regularly oval, slightly acuminate posteriorly, sides regularly arcuate, base sub-truncate, humeri slightly prominent anteriorly; disc convex, feebly striate, striæ not closely punctured, intervals flat. The seventh slightly elevated at humerus, surface very densely scaly and with numerous very short, semi-erect, scale like hairs. Body beneath densely scaly, sparsely setose, legs densely scaly, tibiæ sparsely pilose. Length .20–.30 inch; 5–7.5 mm.

This species presents two varieties.

var. tesselatus Say. Head and rostrum with earthy-brown scales, paler around the eye and beneath. Thorax similar in color, with a narrow pale line at the sides and a broader pale line on each side of a broad median brownish space. Elytra earthy-brown, on each side of suture obscurely variegated with paler mottlings and a small pale humeral line, and a narrow space at the side of the tip.

These specimens are found in Southern Illinois.

var. pallidus. This variety is of somewhat larger size than the preceding, the scales covering the surface are pale-greenish white, and with barely perceptible darker spaces arranged in a manner similar to the preceding variety.

This variety occurs from Kansas to Texas.

Both varieties have the lateral striæ of the elytra more distinctly impressed than those of the disc.

A specimen of the latter variety was submitted to Mr. Pascoe, who was of the opinion that it might be identical with "*Sitona durius* Germ." *

A. Fulleri, n. sp.

Form oblong oval, surface not densely clothed with dark-brown scales. Head and rostrum longer than the thorax, densely punctured, sparsely scaly. Rostrum with feeble ridge on each side from the tip nearly to the eyes. Thorax cylindrical, apex and base equal and truncate, very slightly wider than long, sides feebly arcuate, a fine median line, disc moderately convex, densely punctured, sparsely scaly. Elytra regularly oval, humeri entirely obliterated, base sub-truncate, surface indistinctly striate, and with rows of large, moderately closely placed punctures, intervals flat, not densely scaly, and with very minute sub-erect hairs; scales dark-brown, a whitish or paler stripe beginning at the humerus, passing along the lateral margin, ending in a short oblique fascia at the middle of the elytra. Body beneath sparsely scaly. Legs with scale-like hairs. Anterior tibiæ rather strongly denticulate within, articular surfaces of middle tibiæ not ascendent. Length .26 inch ; 6.5 mm.

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* Since the above was written the following note has been received from Mr. H. Jekel.

"*Liparus tesselatus* Say. It is a *Naupactus* sensu Sch., so very allied to the female of *N. durius*, Germ., from Brazil, that, should not the size be a third larger, and the habitat so distant I would have regarded them as identical * * *. For that group of *Naupacti* I have created the genus AOMOPACTUS."

I am not aware that this genus suggested by Mr. Jekel has been described. The remarks apply especially to the variety *pallidus*, *Fulleri* being more nearly allied to *ovulum* Jek., from the Pampas, Mendoza.

The form of this species is not unlike the preceding. The elytra are, however, narrower between the humeri and the thorax, not broader at base.

This species is dedicated to my friend And. S. Fuller, to whom I am indebted for this and many other species.

Occurs from New Jersey to Montana.

PHACEPHOLIS n. g.

Rostrum longer than the head, slightly cuneiform, sub-quadrangular, flattened above, and with a fine median groove, tip triangularly emarginate. Scrobes narrow, moderately deep, well defined, slightly broader behind and passing immediately beneath the eyes. Eyes round, moderately prominent. Antennæ sub-median, long, slender; scape nearly attaining the margin of the thorax, slender, rather suddenly clavate at tip; funicle 7-jointed, longer than the scape, joints 1–2 long, the second much longer than the first, 3–7 sub-equal, 7 obconical; club elongate oval. Thorax narrower in front, sides moderately arcuate, base truncate. Scutellum triangular. Elytra oval, feebly emarginate at base, humeri rounded. Intercoxal process of abdomen broad, truncate at tip; second segment longer than the two following, separated from the first by a strongly arcuate suture. Anterior tibiæ mucronate at tip, rather strongly denticulate within. Hind tibiæ truncate at tip with oval, densely scaly space, articular surfaces cavernous, not ascending, Body densely scaly and pilose. Claws free.

This genus resembles the preceding in form and differs in the structure of the hind tibiæ and the more distinct scutellum. The mandibles are moderately prominent, exposed at base by the emargination of the genæ, their surface scaly. The supports of the deciduous pieces are prominent, and obliquely truncate. The deciduous pieces are long, slightly curved and glabrous. I cannot satisfy myself that this genus should enter any of the genera proposed by Lacordaire.

Three species occur in this genus which differ in the form of the thorax as follows :

Thorax squarely truncate ; eyes not prominent................	**elegans.**
Thorax obliquely truncate ; eyes prominent ; head slightly constricted behind the eyes....................................	**obscura.**
Thorax obliquely truncate and slightly prolonged over the head ; eyes feebly prominent..............................	**candida.**

The first species has the thorax squarely truncate, so that it is no longer on the dorsal than on the sternal side. The eyes are not prominent, and the scales, although variable, of a metallic or pearly lustre. In the second species the head is broadly constricted behind the eyes, the latter prominent, and the thorax is obliquely truncate, but not sub-lobed in front, the scales of the surface are luteous without lustre, with darker spaces on the thorax and elytra. The third species is larger than the other two, the scales pale cinereous or nearly white. The thorax is obliquely truncate and somewhat lobed in front and slightly prolonged over the occiput.

P. elegans, n. sp.*

Oblong oval, moderately robust, surface densely covered with brilliant metallic blue scales, varying to pearly and cupreous. Head and rostrum as long as the thorax, sparsely punctured, densely scaly, with sparsely placed, short, erect hairs, median line finely impressed. Thorax broader than long, slightly narrower in front, sides feebly arcuate, apex and base truncate, hind angles slightly laminiform ; disc moderately convex, moderately coarsely punctured, densely covered with round scales and with sparsely placed, very short, erect hairs. Elytra oval, slightly acuminate posteriorly, sides feebly arcuate, surface striate, stria with moderate but not closely placed punctures, intervals flat, densely scaly, and with two or three rows of short, erect, white hairs. Body beneath rather sparsely scaly and setose. Legs sparsely scaly, tibiæ sparsely hairy. Length .20–.28 inch ; 5–7 mm.

The thorax at base is very feebly bisinuate, but to such a small degree that I have preferred to say truncate. The vestiture varies in color greatly and is always paler beneath than above. Resembles considerably the figure given by Duval of *Eusomus ovulum*.

Occurs from Kansas to Texas. The specimens from the latter region are more brilliant.

P. obscura, n. sp.

Form oval, robust, surface densely covered with scales and short erect hairs. Head and rostrum nearly as long as the thorax, head feebly constricted behind the eyes, sparsely punctured, densely covered with brownish scales, above each eye a paler space, head and rostrum beneath nearly white. Thorax oval, slightly longer than wide at base, apex narrower and obliquely truncate, sides moderately arcuate and gradually converging from base to apex ; disc moderately convex, punctured, median line feeble, densely covered with brownish scales, a broad paler line on each side of middle, and a narrower line at the sides. Elytra regularly oval, scarcely attenuate at apex, disc convex, striate, striæ with moderate, not closely placed punctures, intervals feebly convex at the sides, surface densely covered with luteous and brownish scales in irregular longitudinal stripes, each interval with one or two rows of moderately long erect white hairs. Body beneath and legs moderately densely scaly and paler than the upper surface. Length .22–.28 inch ; 5.5–7 mm.

This species has much more the aspect of *Strophosomus* than any other in our fauna. The eyes are much more prominent than the other two species, and in this resembles the above genus.

Two specimens, Texas.

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* "*Naupactus* of the group *stupidus*, *nobilis* and *crinitus*, belonging to my genus *Pantopactus*." Jekel.

P. candida, n. sp.

Form oblong, surface densely covered with nearly white scales. Head and rostrum as long as the thorax, median groove fine, attaining the occiput, surface sparsely punctured, densely scaly and with sparsely placed, very short, white hairs. Eyes feebly prominent. Thorax as long as wide at base, slightly narrowed in front, sides moderately arcuate, base feebly bisinuate, apex obliquely truncate and slightly lobed in front and feebly sinuate behind the eyes; disc convex, median line feebly impressed, a slight impression within each hind angle, surface granular, densely scaly and with very sparse hairs. Elytra regularly oval, base feebly emarginate at middle, humeri very obtuse, sides moderately arcuate, disc convex, striate, striæ with elongate, moderately closely placed punctures, intervals moderately convex, densely scaly and with very short white hairs. Body beneath and legs densely scaly, tibiæ sparsely fimbriate. Anterior and middle tibiæ denticulate within and mucronate at tip, more strongly in the anterior. Length .32 inch; 8 mm.

This species is the largest of the three at present known, and differs abundantly from either of those just described, as shown in the synoptic table and the remarks following.

Two specimens, Colorado and Kansas.

ACHRASTENUS n. g.

Rostrum nearly horizontal, longer and narrower than the head, parallel, slightly flattened, very feebly emarginate in front, distinctly notched behind the mandibles, above with a fine median groove. Head very slightly constricted behind the eyes. Scrobes widely open from above; cavernous in front, very shallow posteriorly, slightly arcuate and directed towards the eyes. Eyes oval, slightly truncate in front and pointed beneath. Antennæ moderately long, slightly scaly; scape feebly clavate, nearly attaining the thorax; funicle not longer than the scape, 7-jointed; joints 1–2 longer, the second slightly longer than the first, joints 3–7 slightly obconical, sub-equal; club oval. Thorax cylindrical, narrower in front, apex obliquely truncate, base very slightly arcuate. Scutellum moderate, oval. Elytra oval, base moderately emarginate, humeri oblique, feebly prominent. Intercoxal process moderate, oval at tip. Second segment of abdomen longer than the two following united, separated from the first by a strongly arcuate suture. Anterior and middle tibiæ feebly mucronate; articular surfaces of hind tibiæ feebly cavernous, sparsely scaly. Claws free. Body densely scaly.

According to the system adopted by Lacordaire, this genus belongs to the *Eustylides* of the *Otiorhynchides*. The construction of the sternal side pieces excludes it at once from the latter tribe. The scrobes, and in fact the structure of the rostrum generally, are very nearly that of *Peritelus*, and its appearance, shape and coloration do not differ remarkably from *P. griseus* of Europe. I prefer, however, to place the genus here as a degraded member of the tribe with affinities with the *Otiorhynchini*. Instances are numerous in every tribe of genera which have characters of other tribes, of more or less distant position, in addition to the distinctive characters of the tribe to which they belong. In addition to the above generic characters the outer elytral striæ have the characteristic form of the other members of the tribe, the outer stria joins the next inner one third from the base. This is not known in our Otiorhynchini.

A. griseus, n. sp.

Form oblong oval, gradually narrower anteriorly, surface densely covered with greyish scales, irregularly variegated on the elytra with darker spots. Head and rostrum as long as the thorax; a fine medium line extending to the vertex, surface moderately densely scaly. Thorax cylindrical, somewhat narrower in front, slightly longer than wide; apex truncate, base feebly arcuate, sides moderately arcuate, disc convex, moderately densely, but not coarsely, punctured. Elytra oval, one and a half times longer than wide, conjointly emarginate, humeri oblique, feebly prominent, sides moderately arcuate and gradually divergent, apex feebly prolonged; disc moderately convex, feebly striate, striæ with moderate, not closely placed punctures, intervals feebly convex, surface densely scaly, each interval with a single row of minute setæ. Body beneath and legs densely scaly, and sparsely setose. Anterior tibiæ with distant denticulations within; at tip (also the middle tibiæ) finely mucronate. Length .20–.24 inch; 5–6 mm.

In many of the specimens the intervals slightly alternate in the degree of their convexity.

Occurs in Texas.

Group III. Aphrasti.

Head broader behind the eyes; scrobes slightly visible from above, deep, directed toward the eyes but not reaching them, gradually broader behind. Antennæ moderate. Elytra slightly wider at base than the thorax, humeri obtuse. Scutellum distinct. Articular surface of hind tibiæ not cavernous, slightly scaly. Claws connate.

The structure of the tarsal claws will serve to distinguish this group from either of the preceding. The outer stria of the elytra joins the next inner at one-third from the base as in all the Cyphini and the genæ are deeply emarginate.

One genus constitutes this group in our fauna.

APHRASTUS Sch.

Aphrastus Schönh. Curcul. vii, 1, p. 39.

Head broader behind the eyes, vertex convex. Rostrum slightly longer and narrower than the head, moderately robust, subangulate, above flat with a fine groove attaining the vertex, tip and genæ deeply emarginate. Eyes round, moderately convex. Scrobes short, deep, passing directly backward but not reaching the eyes, moderately dilated behind and slightly visible from above. Antennæ moderate; scape slightly arcuate, attaining the thoracic margin; funicle 7-jointed, 1–2 longer, 3–7 short, gradually decreasing and becoming wider; club oval. Thorax cylindrical, slightly narrower in front, apex and base truncate. Scutellum moderate. Elytra oblong oval, slightly attenuate at apex; base slightly broader than the thorax, humeri obtuse. Intercoxal process moderately broad, rounded at tip. Second segment longer than the two following united, and separated from the first by a strongly arcuate suture. Articular surfaces of hind tibiæ open, slightly scaly. Claws connate. Anterior and middle tibiæ feebly mucronate, not denticulate within. Surface scaly and hispid.

The second joint of the funicle varies in the two species. It is slightly longer than the first in *tæniatus* and shorter in *unicolor*. Lacordaire is in error in stating that the second joint is twice the length of the first in *tæniatus*.

Our species are two in number.

Second joint of funicle longer than the first; elytra with four brown stripes..	**tæniatus.**
Second joint of funicle shorter than the first; elytra uniformly cinereous...	**unicolor.**

A. tæniatus Gyll. Schönh. Gen. Curc. ii, p. 460; Say Curc. N. A. p. 9, without description.

Head and rostrum shorter than the thorax, densely scaly except at tip; scales pale brown above, cinereous at the sides and beneath, and with sparsely placed short erect hairs. Thorax cylindrical, slightly narrowed in front, sides feebly arcuate, base squarely, apex obliquely truncate, disc moderately convex, not densely punctured, densely scaly; scales pale brown; a pale line on each side of middle, sides and beneath cinereous. Elytra oval, feebly striate, striæ with moderately coarse very regularly placed punctures, intervals feebly convex, surface densely clothed with cinereous scales; the second and fourth intervals with brownish scales, the inner stripe longer, each interval with a row of very short whitish hairs. Body beneath and legs densely covered with cinereous scales; tibiæ sparsely hirsute. Length .20–.22 inch; 5– 5.5 mm.

This insect is very well-known to most collectors. The species has usually been attributed to Say, but as the description of Gyllenhal is really the first, it appears just to so accredit it.

Occurs in the Middle and Southern States.

A. unicolor, n. sp.

Form elongate oval, densely covered with cinereous scales. Head and rostrum as long as the thorax, moderately densely scaly. Thorax regularly cylindrical, sides scarcely arcuate, apex obliquely, base squarely truncate, disc sparsely punctured, surface densely scaly and with whitish erect hairs. Elytra oblong oval, feebly striate, striæ with large rather coarse punctures very regularly placed, intervals feebly convex, densely scaly, each with a single row of short, white, erect hairs. Body beneath, especially the abdomen sparsely scaly. Legs moderately scaly, tibiæ sparsely pilose. Length .18 inch; 4.5 mm.

This species is rather narrower than *tæniatus*; thorax more regularly cylindrical, and with the erect hairs more distinctly visible. It differs especially in the structure of the funicle; the second joint being but little more than half the length of the first.

One specimen. Texas.

Tribe III. EXOPHTHALMINI.*

Rostrum longer than the head, usually quadrangular and dilated at tip, the latter emarginate. Genæ not or feebly emarginate. Head not prolonged behind the eyes. Scutellum distinct. Elytra wider at base than thorax (*Omileus* excepted), outer stria entire, not confluent with the next. Articular surfaces of hind tibiæ internal, at least moderately cavernous. Claws free.

This tribe is constructed at the expense of the Cyphides as defined by Lacordaire. It contains those genera in which the rostrum is elongate, the tenth stria entire, and the genæ not or very feebly emarginate. As thus defined, it will probably contain all of the last six genera of the Cyphides. In examining a series of Cuban species presented by Prof. Poey to the American Entomological Society, I find the specimens of *Exophthalmus Sommeri* having the fimbriæ at the sides of the thorax as strongly marked as in any of the genera allied to *Tanymecus*. The elytra are not, each one, prominent at base, and the thorax is feebly bisinuate. It should constitute a new genus of *Tanymecini*. In this tribe will be included (*Geonemus*) *alternans*, in which, however, the elytra are not wider at base than the thorax. The structure of the thoracic parapleuræ separates it from the genera allied to *Epicærus*, etc.

The following groups may be recognized.

Submentum not pedunculate; mentum broad.
  Humeri prominent; thorax bisinuate at base............ **Exophthalmi.**
  Humeri very oblique or rounded. Thorax truncate at base.. **Omilei.**
Submentum pedunculated; mentum narrow.
  Humeri prominent. Thorax truncate at base.......... **Evoti.**

The last group shows strong affinities with the next tribe.

Group I. Exophthalmi.

Rostrum longer than the head, sub-quadrangular, slightly dilated at tip, which is feebly emarginate; genæ moderately emarginate. Sub-mentum not pedunculate, mentum broader than long, entirely concealing the maxillæ. Antennæ moderate, scape at most merely passing the eye. Scrobes narrow, moderately arcuate, passing beneath the eyes. Thorax distinctly, at times feebly, bisinuate at base. Elytra wider than the thorax at base, or at least with the humeri very distinct, neither oblique nor obliterated. Scutellum distinct. Articular surfaces of hind tibiæ very feebly cavernous, glabrous. Claws free.

One genus represents this group in our fauna.

LACHNOPUS Sch.

Lachnopus Schönh. Curc. vi, 1, p. 380.

Rostrum longer and narrower than the head, slightly broader at tip and feebly emarginate. Vertex convex, separated from the front by a feeble

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* This tribe should be known as EVOTINI and would have been corrected had not page 81 been already printed.

transverse impression. Eyes large, round, moderately prominent. Scrobes narrow, deep, nearly straight, passing immediately beneath the eyes. Antennæ moderately long, scape gradually clavate, passing the posterior margin of the eyes ; funicle 7-jointed, 1–2 longer, sub-equal, 3–7 shorter, sub-equal; club oval. Thorax oval, narrower in front, truncate at apex, feebly bisinuate at base. Scutellum distinct, moderate. Elytra oblong oval, wider than the thorax, emarginate at base, humeri moderately prominent, obtuse. Intercoxal process of abdomen broad, sub-truncate ; second segment of abdomen longer than the two following together, separated from the first by an arcuate suture. Anterior and middle tibiæ mucronate at tip, and denticulate within, hind tibiæ fimbriate within. Surface partially scaly.

L. floridanus, n. sp.

Form oblong, oval, color black, shining, surface with white scales, very sparsely placed, condensed in small round patches on the elytra. Head and rostrum slightly longer than the thorax, black, shining, moderately densely punctured, and with white scales very sparsely placed. Antennæ brownish, sparsely hairy. Thorax oval, narrowed at apex, slightly broader than long, sides arcuate, base slightly narrower and feebly bisinuate ; disc moderately convex, densely, and rather coarsely punctured, rugulose at the sides, surface black, shining, with whitish scales very sparsely placed. Scutellum smooth, shining. Elytra oblong, oval, base emarginate at middle ; disc moderately convex, and with rows of large, moderately deep punctures, rather closely placed, the third and fourth somewhat irregular at the declivity ; surface black, shining, sparsely punctured and with white scales very sparsely placed, becoming condensed in small round spots, distantly placed on alternate intervals. Body beneath black, shining, sparsely punctured and with very few scales. Legs black, sparsely scaly. Length .26 inch ; 6.5 mm.

This species is of the size of *L. hispidus* Gyll. (Cuba) and of very similar ornamentation. The thorax is, however, narrower at base, eyes more prominent and vertex more convex.

One specimen, Florida.

Group II. **Omilei.**

Rostrum longer than the head, narrower, quadrangular, and slightly dilated in front. Genæ feebly emarginate. Thorax truncate at apex and base. Elytra not wider than the thorax, feebly emarginate at base, humeri either very oblique or broadly rounded. Articular surfaces of hind tibiæ very feebly cavernous.

The differences between this group and the preceding are feeble, and with other genera would probably be united with it.

Two genera are at present known to me, one only native.

Second segment of abdomen not longer than the two following together, first suture nearly straight. Second joint of funicle short.. **OMILEUS.**

Second segment longer than the two following, first suture strongly arcuate. Second joint of funicle longer than the first.. *gen. nov.*

The type of the second genus is *Geonemus alternans* Boh. (Cuba). The articular surfaces of the hind tibiæ are not scaly in this species as stated by Lacordaire, Genera, vi, p. 131. *G. aureosquamosus* Duval, (Cuba) does not belong to the present tribe, but should form a new genus of *Cyphini*, as defined in the present memoir.

OMILEUS n. g.

Rostrum longer than the head and very slightly narrower, cylindrical at base, slightly flattened above, feebly dilated and emarginate at tip; genæ not emarginate. Scrobes deep, well defined, slightly arcuate, passing obliquely beneath and slightly in front of the eyes. Eyes oval, slightly longitudinal. Antennæ moderate; scape attaining the posterior margin of the eyes, feebly thickened; funicle 7-jointed, first joint moderate, second scarcely longer than the third, 3–7 short, sub-equal; club oval. Thorax truncate at apex and base. Scutellum small, oval. Elytra oval, not wider at base than the thorax, humeri broadly rounded. Metasternum moderate. Intercoxal process broad, rounded in front, second segment equal to the two following together, first suture very nearly straight. Anterior and middle tibiæ mucronate. Articular surfaces of hind tibiæ feebly cavernous, glabrous.

O. epicæroides, n. sp.

Form elongate, oval, surface densely covered with cinereous scales, variegated with brown. Head and rostrum slightly longer than the thorax, densely punctured and covered with cinereous scales, at tip nearly naked. Thorax as broad as long, apex slightly narrower than the base, sides strongly arcuate, median line moderately impressed, surface sparsely tuberculate, densely covered with cinereous scales, a broad median and narrow lateral stripe fuscous. Elytra regularly oval, striate, striæ with moderately coarse punctures, intervals feebly convex, and each with two rows of scale-like hairs, surface densely covered with cinereous scales, disc with large fuscous spot nearly divided by a transverse cinereous fascia interrupted at middle. Body beneath densely covered with cinereous scales. Legs densely scaly, femora darker at base. Length .30–.32 inch; 7.5–8 mm.

The facies of this species is almost exactly that of certain elongate forms of *Epicærus imbricatus*, and it would have been placed in the same tribe if the structure of the sternal side pieces were similar.

This species occurs in Texas.

Group III. Evoti.

Rostrum elongate, strongly dilated and auriculate at tip. Scrobes visible from above. Scutellum distinct. Elytra wider at base than the thorax, humeri moderately prominent; marginal stria entire. Articular surfaces of hind tibiæ feebly cavernous. Claws free.

One genus only is known to me which can be placed here.

EVOTUS Lec.

Evotus Lec., American Naturalist, 1874, pp. 458–9.

Rostrum horizontal, longer than twice the head, narrower, sub-quadrangular and compressed at base, tip dilated and nearly twice as broad as at middle, auriculate, and broadly emarginate; genæ not emarginate. Sub-mentum distinctly pedunculate. Mentum oval, longer than wide, maxillæ slightly visible at the sides. Scrobes visible from above in front and moderately deep, very nearly straight, very shallow posteriorly, and directed to the lower margin of the eyes. Eyes oval, slightly oblique and sub-acute beneath. Antennæ long, rather slender; scape gradually clavate and attaining the middle of the eye; funicle 7-jointed, slightly longer than the scape, joints 1–2 longer, the second longer than the first, joints 3–7 obconical, the seventh longer than the preceding; club elongate, oval. Thorax transversely oval, apex truncate, base slightly arcuate. Scutellum oval. Elytra oval, broader at base than the thorax, humeri obtuse, moderately prominent. Metasternum moderate, side pieces wide, formed as defined for the division. Intercoxal process broad, oval at tip. Second segment of abdomen slightly longer than the two following together, separated from the first by an arcuate suture. Anterior and middle tibiæ mucronate at tip. Articular surfaces of hind tibiæ feebly cavernous and glabrous. Tarsi rather slender, third joint deeply bilobed, last joint slender and as long as the first two. Claws moderate, free.

This genus has been defined at greater length than has been the custom in this paper, on account of the very remarkable assemblage of characters it presents. Were it not for the very plain scar on the mandibles it might be suspected to have some affinity with the genera allied to *Alophus*, etc.

E. naso Lec. (*Otiorhynchus*) Pacif. R. R. Rep. p. 56; Am. Nat. 1874, p. 459.

Form elongate, oval, color black shining, moderately densely covered with scales, varying in color from ochreous to cinereous. Head and rostrum longer than the thorax, moderately, densely punctured, sparsely scaly, a fine median line, more distinctly impressed on the vertex. Thorax oval, slightly broader than long, narrower in front, apex truncate, base feebly arcuate, sides rather strongly arcuate in front; median line indistinct, disc moderately convex, densely punctured, scales sparse, except on the median line and sides. Scutellum densely scaly and paler. Elytra oval, moderately convex, with rows of moderate punctures, intervals densely punctulate, surface moderately, densely scaly, and variegated with paler spots at the sides. Body beneath and legs densely scaly and hairy, scales pearly. Length .30–.36 inch; 7.5–9 mm.

Occurs rather abundantly in Oregon, and also in Colorado.

Tribe IV. PHYLLOBIINI.

Head prolonged behind the eyes, these round or slightly oval. Mentum small, usually concealing the maxillæ. Rostrum usually stout, cylindrical, truncate or very feebly emarginate at tip. Genæ not emarginate. Scrobes short, sub-terminal. Meso- and metasternal side pieces broad, the former diagonally divided. Articular surfaces of the hind tibiæ terminal, glabrous. Claws connate. Tenth elytral stria free in its entire extent. Scutellum distinct.

The above characters serve to isolate a number of genera evidently closely allied among themselves, and also with well-marked affinity with certain members of the tribe *Cyphini*. The mandibular scar is not prominent in any of our genera, but is round and directly on the face of the mandible itself. The deciduous piece is moderately long, glabrous and regularly falciform. The mentum varies in size in the genera of this group, but not to the extent of causing *Scythropus* and *Phyllobius* to be widely separated.

The following genera compose this tribe in our fauna:

Elytra wider at base than the thorax.	
Mentum entirely concealing the maxillæ.........	PHYLLOBIUS.
Mentum smaller, maxillæ visible at the sides.	
Rostrum slightly narrower than the head; alæ slightly divergent........................	CYPHOMIMUS.
Rostrum short, stout; alæ not divergent......	SCYTHROPUS.
Elytra elongate, oval, as narrow at base as the thorax.	
Mentum small, maxillæ entirely exposed......	MITOSTYLUS.

In *Mitostylus* the sub-mentum is very slightly pedunculate. *Scythropus* has the gula semicircularly emarginate, and the maxillæ visible at the sides of the mentum, the other three genera have the gular notch nearly square. In the genera 2 and 4 the mentum is very narrow and the other parts of the mouth very distinctly visible.

PHYLLOBIUS Germ.

Phyllobius Germ. Ins. Spec. nov. p. 447.

Rostrum as long as the head and somewhat narrower, feebly dilated and slightly emarginate at tip. Scrobes in the form of fossets, sub-terminal. Eyes oval, slightly oblique, moderately prominent. Antennæ long and slender; scape slender, feebly clavate, attaining the margin of the thorax, funicle 7 jointed, 1–2 longer, the second slightly longer than the first, 3–7 sub-equal, obconical; club elongate oval. Thorax oval broader than long. Scutellum distinct. Elytra broader at base than the thorax, humeri moderately prominent, oblong. Intercoxal process oval. Second segment not as long as the two following united, separated from the first by a suture nearly straight. Femora clavate, the anterior more strongly. Anterior and middle tibiæ mucronate, articular surfaces of hind tibiæ strictly terminal. Claws connate. Body densely scaly.

One species is known to me in our fauna which may be merely accidental in its occurrence as I have seen but one specimen.

· **P. calcaratus** Fab. (*Curculio*) Ent. Syst. i, 2, p. 485; Gyll. Sch. Gen. Curc. ii, p. 435.

Oblong, black, moderately, densely covered with bluish-green piliform scales, legs reddish. Head and rostrum longer than the thorax, densely punctured, sparsely scaly. Thorax broader than long, slightly constricted and narrower at base than apex, sides rather strongly arcuate, disc convex, moderately densely punctured, not densely scaly. Elytra oblong, parallel, acuminate posteriorly, nearly three times as long as wide, striate, striæ with moderate punctures, intervals feebly convex, densely punctured and moderately, densely scaly. Body beneath very sparsely covered with piliform scales. Legs rufous, sparsely hairy, femora strongly dentate. Antennæ rufous. Length .30 inch; 7.5 mm.

One specimen from Canada.

The Catalogus of Gemminger and Harold gives *glaucus* Scop. as an older name. As the species is introduced and hardly concerns our fauna, I adopt the name used by English entomologists, leaving bibliography to those more intimately concerned.

CYPHOMIMUS n. g.

Rostrum a little shorter and narrower than the head, sub-cylindrical, alæ slightly divergent, genæ not emarginate, tip feebly notched. Head moderately prolonged behind the eyes. Scrobes cavernous in front, suddenly flexed, passing beneath at some distance from the eyes. Eyes round, moderately prominent. Antennæ rather slender. Scape slender, gradually thicker to tip and nearly attaining the margin of the thorax; funicle 7-jointed, first joint nearly as long as the two following, 2–7 obconical, gradually decreasing in length; club elongate, oval. Thorax cylindrical, slightly narrower in front. Scutellum small, triangular. Elytra wider at base than the thorax, humeri moderately prominent. Metasternum moderate. Intercoxal process oval at tip. Second segment of abdomen longer than the two following, first suture arcuate at middle. Tibiæ not mucronate, articular surface of hind tibiæ terminal, glabrous. Claws connate at base. Marginal elytral stria free.

In form and general appearance the only species composing the genus resembles *Brachystylus acutus* but with a longer head and rostrum.

C. dorsalis, n. sp.

Form oblong, oval, narrowed in front, surface densely scaly. Head and rostrum as long as the thorax, surface densely covered with whitish scales, a dark stripe on the vertex and behind each eye, and with erect, short hairs. Thorax cylindrical, slightly wider than long, narrower and feebly constricted in front, apex obliquely, base squarely truncate, sides feebly arcuate, apical margin above slightly thickened, surface sparsely punctured and with short, erect hairs, densely covered with cinereous scales, and with three longitudinal stripes darker. Elytra nearly twice as wide as the thorax, humeri prominent, sides slightly divergent, surface striate, striæ punctured, intervals flat, with a single row of short black hairs, densely covered with cinereous scales, a large discal space fuscous, very broad at the declivity, extending anteriorly along the intervals 1–2–3 and at base 4; third interval at base with a cinereous line; a small fuscous spot at the tip of the fifth interval. Body beneath piceous, shining, sparsely scaly. Legs rufous, femora at middle piceous, sparsely scaly and pilose. Length .20 inch; 5 mm.

One specimen, Missouri.

Can this possibly be *Polydrosus americanus* Gyll. ? (Sch. Gen. Curc. ii, p. 136). I cannot otherwise identify the species.

SCYTHROPUS Sch.

Scythropus Schönh. Curc. Disp. Meth. p. 140.

Rostrum, short, stout, slightly narrowed in front, angles rounded, declivous and truncate at tip, with arcuate carina and smooth space. Scrobes short, badly limited and slightly arcuate. Eyes distant from the thorax, round, slightly prominent. Antennæ long, scape long, slender, gradually clavate, slightly arcuate and passing the eyes behind; funicle 7-jointed, 1–2 longer, the first slightly longer than the second, 3–7 shorter, gradually decreasing; club elongate, oval. Thorax short, cylindrical, slightly narrower in front. Scutellum small, nearly oval. Elytra wider at base than the thorax, feebly emarginate, humeri obtusely prominent. Metasternum moderately long. Intercoxal process oval at tip. Second abdominal segment longer than the two following together, first suture arcuate at middle. Articular surfaces of hind tibiæ terminal. Tarsal claws small, connate at base. Body densely scaly.

In addition to the above characters it will be seen that the gular notch is semicircular, the mentum small and rather narrow. The mandibles are short, robust, glabrous, the scar oval, terminal and not prominent. The deciduous pieces are long, moderately stout and falciform.

Two species occur in our fauna. In one, *elegans*, the anterior and middle tibiæ are sinuate within, especially in the ♂, the other, *californicus*, the tibiæ are scarcely perceptibly sinuate. The vestiture also varies and may be thus expressed:

Body densely covered with scales of variable color from brilliant green to cinereous, suture always, sides usually of paler color...............................	**elegans.**
Body less densely covered with piliform scales, brownish or ferruginous, region of the suture marmorate with white	**californicus.**

S. elegans Couper. (*Polydrosus*) Canadian Naturalist, 1865, p. 63.

Form oblong, densely scaly. Head and rostrum as long as the thorax, surface densely scaly except at tip. Thorax wider than long, apex and base truncate, a slight constriction at the sides behind the apical margin, sides moderately arcuate, disc moderately convex, surface densely scaly. Elytra oblong, gradually broader behind the humeri, narrowed at apical third, striate, striæ finely and closely punctured, intervals flat, densely scaly and with minute sub-erect hairs. Body beneath densely scaly and in color similar to the upper surface. Legs piceous or piceo-rufous, femora densely scaly, tibiæ paler and more distinctly pubescent. Length .20–.28 inch ; 5–7 mm.

The color of the scales is very variable and may be rather brilliant green, slightly cupreous, plumbeous or cinereous. Usually the sides of the elytra are paler than the rest of the surface, the suture always so.

Occurs from Canada to California.

S. californicus, n. sp.

Form of *elegans* but slightly narrower. Surface less densely covered with brownish or ferruginous piliform scales, the region of the suture irregularly marmorate with white. Thorax scaly, broader than long. Legs pale rufous, sparsely pubescent. Tibiæ very feebly arcuate. Length .24 inch ; 6 mm.

These few words give the differences observable between the two species. The head is also narrower, and the rostrum less robust. *S. californicus* resembles the *mustela* of Europe.

Two specimens, Eldorado Co., California.

MITOSTYLUS n. g.

Rostrum cylindrical, shorter than the head, slightly narrower, tip very feebly emarginate, and with a smooth triangular space. Scrobes short, badly defined, suddenly flexed. Eyes longitudinally oval, slightly truncate in front. Antennæ slender, three-fourths the length of the entire body; scape long, slender, slightly clavate and attaining the margin of the thorax; funicle 7-jointed, 1–2 longer, the first longer than the second ; 3–7 obconical, gradually shorter ; club elongate, oval, pointed at tip. Thorax cylindrical, sides feebly arcuate. Scutellum small, triangular. Elytra not wider at base than the thorax, oblong oval. Metasternum rather short. Intercoxal process broadly oval, second segment longer than the two following, first suture arcuate at middle. Tibiæ straight, tarsi slender, claws connate. Tenth elytral stria free in its entire extent. Body densely scaly.

The gular notch is rhomboidal, the mentum narrow, an extremely feeble peduncle, maxillæ distinctly visible, and the labial palpi rather prominent. This insect resembles the figures of *Eusomus ovulum*.

M. tenuis, n. sp.

Form rather slender, surface densely covered with bluish white scales. Head and rostrum longer than the thorax, sparsely punctured, moderately densely scaly. Thorax cylindrical, as wide as long, sides feebly arcuate, apex slightly obliquely, base squarely truncate and slightly narrower than the apex, disc moderately convex and scaly, sparsely punctured. Elytra oblong oval, striate, striæ moderately closely punctured, intervals flat, densely scaly and with minute, erect, whitish hairs. Body beneath densely scaly. Legs rufous, femora darker and sparsely scaly, tibiæ pubescent. Length .12–.14 inch ; 3–3.5 mm.

This insect has been mentioned by Dr. Leconte (Amer. Nat. 1874, p. 457) as being probably a *Macrostylus.*

Occurs in Texas.

Tribe V. PROMECOPINI.

Rostrum short, stout, dilated, (*Coleocerus*) or not (*Eudiagogus*) in front, tip emarginate. Antennæ moderate, scape passing the eyes or not, funicle 7-jointed; club oval. Scrobes deep, arcuate, confluent or not beneath. Thorax with large lateral lobes and deeply emarginate beneath. Scutellum distinct. Abdomen normal. Tibiæ feebly mucronate. Tarsal claws free.

This tribe, corresponding with that of Lacordaire, may be considered the most sharply defined and natural of the division. Its small and retracted mentum, large thoracic lobes and the deep emargination of the front of the thorax beneath, at once distinguish it. As in the preceding tribe the genæ are entire and the mandibles covered at base.

The following are the genera in our fauna:

Rostrum strongly dilated at tip, scrobes meeting beneath the eyes ; mesosternum protuberant...	COLEOCERUS.
Rostrum very feebly dilated, cylindrical flattened, scrobes not meeting beneath the eyes but turning forward. Mesosternum not protuberant.	
Elytra broadly oval, scutellum small. Metasternum short..	ARACANTHUS.
Elytra oblong, broader at base than the thorax, scutellum transverse. Metasternum moderately long..	EUDIAGOGUS.

In the last two genera the articular cavities of the hind tibiæ are shallow, the outer free edge is, however, double in *Eudiagogus.* In *Coleocerus* the hind tibiæ is truncate at tip, forming an oval, scaly space, the outer edge of which is formed by a moderately sharp ridge not margined with spinules. The tibiæ are feebly mucronate in all of the genera, although the contrary is stated by Lacordaire.

COLEOCERUS Sch.

Coleocerus Schönh. Gen. Curc. v, p. 927.

Bathyris Lec. Amer. Nat. 1874, p. 461.

Rostrum not longer nor narrower than the head, very short and stout, alæ prominent laterally and beneath, tip emarginate, in front of each eye a triangular impression, above a longitudinal groove. Scrobes sharply defined, arcuate and confluent beneath. Eyes oval, pointed beneath, not prominent. Antennæ moderate; scape gradually clavate, attaining the front of the eyes; funicle 7-jointed, 1–2 longer, the first longer than the second, 3–7 short, gradually decreasing; club oval. Thorax variable, trapezoidal (*dispar*) or transverse (*marmoratus*), ocular lobe broad and prominent. Scutellum transverse, enclosed by the elytra. Elytra oblong oval, parallel, slightly wider than the thorax (*marmoratus*) or not. Mesosternum protuberant in the form of an obtuse spine. Metasternum moderate, side pieces wide. Intercoxal process broad, oval at tip, second segment longer than the two following united, first suture strongly arcuate. Anterior and middle tibiæ mucronate, articular surface of hind tibiæ internal, cavernous, the tip truncate, and with oval scaly space. Claws free. Body oval, densely scaly.

The scar left after the disappearance of the deciduous piece is small and difficult at first to discover, and the genus was placed in the following subfamily. (Amer. Nat. 1874, p. 461). Two other genera are very closely allied to this, and should probably not be separated, *Pororhynchus* and *Periorges*. The former has the thorax margined near the base as in *Coleocerus*, but the mesosternum is not protuberant; the latter has the protuberant mesosternum, but not the thoracic margin. One of our species (*marmoratus*) might be referred to *Periorges*, but the mesosternum is protuberant exactly as in *Coleocerus*, while in that genus the protuberance is slight and somewhat laminiform.

Two species occur in our fauna.

Thorax margined at the sides, at base........................ **dispar.**
Thorax not margined.. **marmoratus.**

C. dispar Lec. (*Bathyris*) Amer. Nat. 1874, p. 462.

Form oblong oval, densely scaly. Head and rostrum as long as the thorax. Rostrum deeply sulcate, moderately densely punctured, and densely covered with rounded scales, of dark cinereous color, a paler line on the vertex. Thorax rhomboidal, gradually narrower from base to apex, sides dilated near the hind angles, and with a short sub-acute ridge, disc moderately convex, densely covered with dark cinereous scales, median line and sides paler, a small spot on each side of middle darker. Scutellum white. Elytra oblong, not wider than the expanded thorax, striate, striæ with moderately large punctures, intervals flat, each with a row of short, erect hairs; surface densely covered with brownish scales; tip, and a short oblique band in front of middle cinereous. Body beneath and legs densely covered with nearly white scales, darker on the outer side of the legs. Length .18 inch; 4.5 mm.

One specimen. Arizona, Dr. Webb. From memory alone, I am inclined to think this species identical with *C. variegatus* which I saw in the cabinet of M. Aug. Sallé, of Paris.

C. marmoratus, n. sp.

Form of *dispar*, densely scaly. Thorax broader than long, sides moderately arcuate, widest at middle, disc moderately convex, covered densely with whitish scales, with black and fuscous sparsely intermixed, and a transverse basal band black. Scutellum white. Elytra oblong oval, indistinctly striate, and with moderately large punctures distantly placed, intervals flat without erect hairs, surface densely scaly; scales cinereous and brown intermixed, and with three very irregular black fasciæ; the first oblique, the second median, transverse, the third sub-apical. Body beneath and legs densely covered with cinereous and brown scales irregularly intermixed. Length .16 inch; 4 mm.

This species is relatively more robust than the preceding. It appears to constitute a form intermediate between the genus *Periorges* and *Coleocerus.* It is certainly not the female of *dispar* as suspected by Dr. LeConte.

Occurs in Texas.

ARACANTHUS Sch.

Aracanthus Schönh. Gen. Curc. v, 1, p. 821.

Rostrum scarcely longer than the head, stout, parallel, finely canaliculate above, tip feebly emarginate. Scrobes linear moderately arcuate, passing immediately in front of the eyes beneath the head, and turning slightly forward. Eyes transversely oval, pointed beneath. Submentum with a short broad peduncle, not emarginate. Antennæ moderate, scape gradually clavate, attaining the middle of the eye; funicle 7-jointed, 1–2 longer, the first longer than the second, 3–7 gradually shorter, slightly flattened; club oval. Thorax slightly wider than long, ocular lobes prominent. Scutellum very small, triangular. Elytra oval, very little broader than the thorax at base, humeri rectangular. Mesosternum oblique, metasternum short. Intercoxal process oval at tip. Abdomen normal. Anterior and middle tibiæ feebly mucronate, articular surfaces of hind tibiæ terminal, not cavernous. Claws free.

This genus is closely allied to *Eudiagogus*, and differs in having the thorax nearly as wide at base as the elytra; the scutellum very small, and the peduncle of the submentum not emarginate. The genus was named, but not characterized by Say.

A. pallidus Say, Curc. p. 9; Compl. works, 1, p. 268; Schönh. loc. cit.

Form oval, surface densely scaly. Head and rostrum not longer than the thorax, canaliculate, moderately, densely, punctured, and moderately covered with scales of a cupreous lustre. Thorax slightly wider than long, base arcuate, sides in front arcuate, posteriorly sub-sinuate, disc convex, with coarse, rather closely placed punctures, surface densely scaly, scales fuscous, sides and median line paler. Elytra oval, scarcely striate and with rows of moderately large punctures not closely placed, surface densely covered with cinereous scales, finely variegated with fuscous, and with short, erect, whitish hairs. Body beneath and legs very sparsely scaly. Length .12 inch; 3 mm.

Many of the scales covering the surface have a slight cupreous lustre, especially those near the sides.

Occurs in Texas and Missouri.

EUDIAGOGUS Sch.

Eudiagogus Schönh. Gen. Curc. vi, 1, p. 307.

Rostrum as long as the head, stout, slightly narrower in front, alæ very feebly prominent, tip slightly notched, genæ entire. Gula quadrangularly emarginate, submentum pedunculate, and deeply emarginate, mentum small, retracted. Eyes oval, pointed beneath. Scrobes narrow, well-defined, passing immediately beneath, and slightly beyond the lower border of the eye, not continued beneath the beak. Antennæ moderate; scape gradually clavate, slightly arcuate, passing slightly the anterior border of the eye; funicle 7 jointed, 1–2 feebly elongated, the first longer than the second, 3–7 gradually smaller; club oval. Thorax broader than long, base slightly narrower, ocular lobes very prominent. Scutellum oval or transverse. Elytra oblong, wider at base than the thorax, humeri oblique, sides parallel. Mesosternum not protuberant. Metasternum short. Intercoxal process broad, oval at tip. Second abdominal segment longer than the two following, first suture strongly arcuate. Anterior and middle tibiæ mucronate at tip, articular surface of hind tibiæ internal, not cavernous. Claws free. Body densely scaly.

This genus may be at once distinguished from all the others of the tribe by the acute emargination of the submentum.

Two species occur in our fauna, which are distinguished as follows :

Scutellum transverse, twice as wide as long. Thorax with four discal black spaces, the two basal smaller. Black stripes of elytra regular............	**pulcher.**
Scutellum smaller, oval. Thorax with two broad, discal, black stripes narrowly separated. Black stripes of elytra with irregular margins............	**Rosenschœldi.**

E. pulcher Fahrs. Schönh. Gen. Curc. vi, 1, p. 310.

Form oblong, densely scaly. Head and rostrum shorter than the thorax, densely covered with cupreous scales, a round spot black. Rostrum with impressed median line, tip with feeble triangular impression. Thorax broader than long, sides strongly arcuate in front, and gradually narrowing to base, the latter slightly arcuate, disc moderately punctured, surface densely covered with cupreous scales, and with four black spots; the posterior smaller, sides of thorax cupreous, beneath the margin a black spot. Scutellum transverse. Elytra oblong, moderately convex, with rows of moderate punctures not closely placed; surface densely scaly, sutural interval cupreous; a broad, black stripe slightly narrowed at its middle, and not attaining the tip, at the side two oblong black spots, one humeral, the other sub-apical, sometimes united in an entire stripe, limb and lateral vitta cupreous. Body beneath less densely scaly, scales pale cupreous, a black spot at the side of the first two ventral segments. Legs less densely scaly, femora nearly nude at apex and base. Tibiæ with short, spinulose hairs within. Length .16–.32 inch; 4–8 mm.

Two varieties occur. One has the lateral black stripe entire, in the other it is broadly divided.

Occurs usually in the first variety in Florida, and in the latter in Texas.

E. Rosenschœldi Fahrs. Schönh. Gen. Curc. vi, 1, p. 309.

Form oblong oval, densely scaly. Thorax as long as wide, sides in front rather suddenly convergent, posteriorly nearly parallel, disc sparsely punctured, densely covered with cupereous scales; a broad, entire black stripe on each side of the middle. Elytra less elongate than in *pulcher*, densely scaly, scales cupreous; a broad, black stripe on each side of the suture much confused at tip, lateral black stripe much more confused or even absent. Scutellum oval. Length .28 inch; 7 mm.

The above notes give the differences between this species and the preceding. It is always less elongate and more robust.

Occurs in Louisiana.

Family VI. CURCULIONIDÆ.

Mentum varying in size, never concealing the base of the maxillæ, larger in the first sub-families and tribes, smaller and oval in those last placed in this memoir, ligula and palpi also varying in size.

Maxillæ exposed, palpi short, 4-jointed, rigid.

Mandibles varying according to sub-family and tribe, as mentioned below, but never with an apical scar.

Antennæ inserted at the side of the beak, varying in position, usually geniculate (only feebly so in *Ithycerus, Cleonini, Piazorhinus*, and *Tachygonus*), with the scape long, (short in *Ithycerus, Piazorhinus*, and *Tachygonus*); funiculus with from 5–7 joints; club composed of three joints and a terminal appendix, annulated, rarely articulated, and then divided into three joints; surface usually entirely sensitive, rarely (*Pissodes, Lissorhoptus, Eurhoptus, Baris*,) with the basal joint shining.

Head globose, eyes usually transverse, sometimes round; beak varying in form and length, labrum wanting.

Prothorax varying in form, without lateral sutures separating the prosternum; coxal cavities confluent or separate, enclosed behind.

Mesosternum variable in width, side pieces differently divided according to tribe, never attaining the coxal cavity. Metasternum variable in length, side pieces sometimes broad, sometimes narrow, indistinct only in *Trachodes*.

Elytra without epipleuræ, but with an acute fold on the inner surface, limiting a deep groove in which the superior edge of the abdomen fits; pygidium sometimes covered, sometimes exposed.

Abdomen with five ventral segments, first and second closely connate; pygidium of male divided so as to form an anal segment.

Front coxæ rounded, sometimes contiguous, sometimes distant; middle coxæ rounded, more or less separated; hind coxæ oval, not prominent, more or less distant, sometimes attaining the elytral margin, but usually entirely enclosed

Legs variable; tibiæ usually mucronate, or hooked at tip; sometimes (especially the hind pair) truncate. Tarsi usually dilated, with the third joint bilobed and spongy beneath, rarely narrow. Claws varying according to tribe, either simple or toothed, diverging and moveable, or fixed and approximate; sometimes connate, and rarely single (*Brachybamus, Mononychus, Barilepton*), entirely wanting in some foreign genera.

This family is by far the largest in the *Rhynchophora*, and therefore exhibits a greater range of variation in some of the important organs than can be seen in the other families. Certain of the most remarkable divergences from the average type may, however, be separated as sub-families, exhibiting relationships with other families, without losing the essential characters of this family; that is to say, the mandibles without scar, the tarsi with the third joint more or less dilated, not spinous beneath, the antennæ with annulated or articulated club.

Of such sub-families I recognize five in our fauna; all of very limited extent, except the *Curculionidæ* (*genuini*).

They may be separated as follows:

A. Condyles of mandibles on outer side, motion lateral.
  Mandibles stout, feebly emarginate at tip, with the inner edge sharp; gular peduncle broad; beak short, broad................ SITONIDÆ.
  Mandibles without sharp inner edge; apparently emarginate at tip, with an additional cusp:
    Antennæ geniculate; gular margin prominent, peduncle and mentum retracted. ALOPHIDÆ.
    Antennæ straight, gular margin not prominent; claws toothed (p. 120)............ ITHYCERIDÆ.
  Mandibles varying in form, usually 3-toothed, sometimes oblique without teeth*, gular margin not prominent, peduncle usually long (p. 121).................................... CURCULIONIDÆ.
B. Condyles of mandibles on upper side, motion vertical (p. 321).. BALANINIDÆ.

Sub-family I. SITONIDÆ.

The species of this sub-family have been heretofore classed with the Otiorhynchide group *Naupacti*. They differ, however, essentially by family characters; the mandibles are short, very stout, with the outer side convex, roughly punctured, and quite destitute of the apical scar which indicates the deciduous cusp; they are broadly emarginate at tip, and the inner edge is acute. These insects are easily known from other Curculionidæ by the mentum larger, more quadrate, slightly concave, and supported on a broad, but not long, gular peduncle. The maxillæ are exposed as in the lower Otiorhynchidæ, and as in all Curculionidæ, and it therefore seems singular that Lacordaire should have classed them with his Adelognathes Cyclophthalmes, without noting the exception in this respect which they make in common with *Cratopus* and *Elytrodon*.† The condyle of

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* In *Desmoris* they are also toothed on the outer edge as in Rhynchitidæ.

† Lacordaire, Gen. Col. vi, 13, note.

the base of the mandible is visible on the outer side, the beak is short, broad, flat, and emarginate at tip. The antennal grooves extend forwards quite to the base of the mandibles; they are short and curve abruptly downwards behind the insertion of the antennæ, which are geniculate, with elongate annulated club covered with sensitive surface. The eyes are small, rounded, convex, and rather finely granulated. The front coxæ are contiguous and prominent, the hind coxæ widely separated and extend to the side margin; the tibiæ truncate at tip, without terminal hook. Tarsi dilated, spongy beneath; claws slender, simple, divergent. The ventral segments are not very unequal, and the sutures are nearly straight. The side pieces of the mesothorax are diagonally divided, and the epimera do not largely attain the prothorax; those of the metathorax are narrow, and suddenly dilated in front.

SITONES Sch.

A few species of this well-known genus occur in our fauna, and as will be observed below, several of them are also found in Europe. They may be tabulated as follows:

Setæ of elytral interspaces very obvious.. 2.
Setæ of elytral interspaces not, or feebly visible.............................. 4.
2. Eyes not prominent.. 3.
Eyes convex prominent, elytra tesselated............... **1. lineellus.**
3. Elytra tesselated.. **2. californicus.**
Elytra uniform dirty brown....................................... **3. sordidus.**
Elytra striped with pale .... **4. vittatus.**
4. Frontal groove deep... 5.
Frontal groove fine, color uniform brown.............. **5. flavescens.**
5. Elytra gray with broad white stripes....................... **6. tibialis.**
Elytra gray without stripes, form narrower............. **7. crinitus.**

1. **S. lineellus** Gyll., Sch. Curc. ii, 111; Allard, Ann. Ent. Soc. Fr., 1864, 354; *Curculio lin.*, Bons., Curc. Suec. ii, 30, f. 18, et auctorum Europ.; *S. indifferens* Say, Curc. 10; ed. Lec. i, 269; *S. scissifrons* Say, ibid.

Kansas two specimens. I have not copied the European synonymy, which may be found in Schönherr. It varies greatly in size, the larger specimen being 7.5 mm. long.

2. **S. californicus** Fahr., Sch. Curc. vi, 267; Mannh., Bull. Mosc. 1843, ii, 289; *S. californius* (err. typ.) Allard, Ann, Ent. Soc. Fr. 1864, 370.

California and Oregon, abundant. This species also varies in size from 6.3 to 4.2 mm.

3. **S. sordidus** Lec., Pac. R. R. Expl. and Surveys, Entom. 54.

California, San Francisco and St. Diego. Closely allied to the preceding and perhaps only a race of the same species. The form is a little less elongate, the prothorax more rounded, and the scales of a uniform dirty brown.

4. **S. vittatus** Lec., Pac. R. R. Expl. and Surveys, Entom. 54.

San Francisco, California. Also closely allied to *S. californicus*, but the elytra are not tesselate, but striped, and the sides of the prothorax are more rounded, as in *S. sordidus.*

5. **S. flavescens** Allard, Ann. Ent. Soc. Fr., 1864, 346; *Curc. flav.* Marsham, Ent. Brit., 311; *S. octopunctatus* Fabr., Sch. Curc. vi, 269. cum mult. synon. Europ.; *S. lepidus* Gyll., Sch. Curc. ii, 104.

Atlantic States, abundant, especially near the sea shore. Quite distinct from all the preceding by the absence of erect setæ, and by the scales being narrow, hair-like and extremely small. It is abundant and widely diffused in Europe, but the American race differs from the European by the color of the scales being more rusty and less gray.

6. **S. tibialis** Germ., Ins. Nov. 416; Gyll., Sch. Curc. ii, 114; Allard, Ann. Ent. Soc. Fr., 1864, 350; *Curc. tib.* Herbst, Col. vi, 217, pl. 75, f. 5; cum synon. Europ.; *Grypidius vittatus* Couper, Can. Naturalist, 1865, 63.

Widely diffused in Europe, where it varies greatly in size. I have received several specimens from Canada, collected by Mr. W. Couper, as types of the synonym above mentioned. It has perhaps been introduced in earth around roots of shrubs or trees; though I have one specimen from Kansas, one from Hudson Bay territory, and several from Dacota.

7. **S. crinitus** Gyll., Sch. Curc. ii, 124; Allard, Ann. Ent. Fr., 1864, 356; *Curculio cr.* Oliv., Ent. 83, 382; pl. 35, f. 550, cum mult. syn. Europe. *S. seniculus* Mannh., Bull. Mosc. 1843, ii, 290.

Europe, and Northern Asia; Oregon, and California. I have three specimens from Oregon, referable to this species, which is easily known by the very small size, narrow form, and absence of distinct erect setæ; the covering is squamose, grayish-white, obscurely striped on the prothorax, feebly banded on the elytra. Length 3.3 mm; 13 inch.

Sub-Family II. ALOPHIDÆ.

The small group of Curculionidæ, represented in Europe by *Alophus*, and in our fauna by several other genera, is sufficiently distinct in its oral structure to warrant its reception as a sub-family. The convex oval elytra, without humeral angles, and with the posterior part strongly deflexed, added to the more or less rounded prothorax, give an appearance not unlike certain Otiorhynchidæ; and the prolongation of the antennal grooves to the tip of the rostrum, which is rather stout, increases the resemblance.

There are, however, radical differences in the mandibles; which are nearly flat externally and punctured; pincer-shaped, with a sharp edge at the apex, which is more or less emarginate, and without apical scar or deciduous piece. The mentum is tolerably large, trapezoidal and flat, retracted with the gular peduncle, which is broad; the posterior edge of the latter is prominent, so that the mouth appears hollow; the maxillæ are exposed, as are also the ligula and palpi.

The beak is as long as the prothorax, rather stout, usually a little wider at tip, with distinct apical wings; the tip is feebly emarginate, and marked also in the first two genera with a deep angulated impression, from which runs backward (except in *Lophalophus*) a medial groove. The eyes are transverse, narrowed below, and finely granulated. The antennæ are geniculated; the scape long, the funicle seven-jointed (the first and second joints longer), the club annulated, oval, pointed; the antennal grooves usually long, well-defined, narrow, and reaching nearly to the lower angle of the eye, except in *Lophalophus*, where they are wider and shorter. The prothorax is distinctly lobed behind the eyes; the front coxæ are contiguous and prominent. The metasternum is nearly as long as the first and second ventral segments, and the side pieces are narrow; first, second and fifth ventral segments long; third and fourth united equal to either of the others. Legs moderate in length, slender; tibiæ truncate at tip, hind pair not mucronate at the inner angle; tarsi dilated, claws entire, separate.

Our genera are as follows:

A. Beak deeply channeled; tarsi brush-like beneath.	
Elytra oval, nearly smooth with faint striæ....	TRIGLYPHUS.
Elytra oblong oval, with distinct humeri, scabrous punctured, with distinct rows of punctures..................................	PLINTHODES.
B. Beak more finely channeled:	
Tarsi setose beneath; elytra with strong rows of punctures, pubescent mixed with scales...	ACMÆGENIUS.
Tarsi brush-like beneath, elytra with obsolete striæ, pubescence above not mixed with scales..	TRICHALOPHUS.
C. Beak finely carinate; elytra with rows of punctures, squamose, with small intermixed bristles..................................	LOPHALOPHUS.
D. Beak not carinate; body covered with scales with rows of bristles on the elytra; second joint of funiculus much shorter than first, equal to the third...............	LEPIDOPHORUS.

TRIGLYPHUS n. g.

Beak as long as the prothorax, stout, subcylindrical; tumid under the base of the antennæ, so as to be broadly and feebly winged; medial groove very deep, separating near the tip into two diverging lines, tip emarginate; sides with a deep groove extending from the upper part of the eye almost to the antennal groove; the latter is deep, extending to the tip, ending at the lower angle of the eye, where it is joined by an anteocular transverse impression. Gular margin prominent, as in the other genera of this sub-family; parallel grooves run backwards from the buccal fissures to the base of the beak, where between them is seen a short groove, wider behind. Antennæ rather slender, funicle seven-jointed, joints one to three gradually shorter, four to six equal, seventh wider but only a little longer, club oval, pointed, not as long as the three preceding united.

Prothorax rather small, sides broadly and feebly lobed behind the eyes, narrowed before and behind, not wider than long, truncate at tip and base; coarsely granulate and punctured; transversely impressed beneath, near the tip.

Elytra oval convex, more than twice as wide as the prothorax in ♀, elongate oval and one-half wider than the prothorax in ♂, with nine rows of shallow punctures, interspaces rugose and sparsely punctured, nearly glabrous, with a few scattered scales in the larger punctures, humeri rounded, scutellum very small, pubescent.

Legs moderately long and slender, thighs somewhat clubbed, and sinuate towards the tip; front tibiæ subsinuate on the inner side, curved inwards and mucronate at tip; the other tibiæ are expanded somewhat at tip, truncate and feebly mucronate. Tarsi shorter than the tibiæ, claws separate.

T. **ater**, n. sp.

Black, nearly opaque (♂), or dull (♀), beak and head strongly not densely punctured; prothorax punctured towards the middle, coarsely granose at the sides, with a narrow sometimes indistinct dorsal line; elytra rugose and punctulate, with rows of larger punctures in which are scattered pale scales; beneath with small scattered patches of ochreous scales. Length 12—14 mm.; .45—.6 inch.

California: Dr. Horn and Mr. Crotch. The patches of scales beneath are on the prosternum in front of the coxæ; the outer angle of the metasternum, and at the sides of the ventral sutures. This singular insect has some resemblance in appearance to *Molytes*, but is more slender, and the characters totally unlike. The elytra are more strongly declivous behind than in the other genera, being in fact perpendicular towards the tip.

PLINTHODES n. g.

Beak as in *Triglyphus*, except that the apical wings are a little wider, and the lateral grooves not so deep, there is also a vague groove between the medial and lateral grooves. Antennæ with the second joint of the funicle longer than the first, and together equal to the four following united: three to seven equal, the seventh a little wider, club oval pointed, as long as the three preceding. Prothorax not narrowed behind, rounded and narrowed on the sides in front, postocular lobes broad, feeble; transversely impressed beneath, and at the sides near the tip.

Elytra oblong-oval, wider in ♀ than in ♂, nearly truncate at base, slightly impressed on the sides behind the humeri, which are rounded but distinct, tip gradually declivous (but not perpendicular); very densely scabrous, with rows of large deep punctures; pubescence fine, sparse, with small scattered narrow pale scales, and two small spots on each elytron; scutellum clothed with ochreous scale-like hairs. Legs as in *Triglyphus*.

The beak is very densely punctured; the prothorax the same, mixed with granules at the sides; the under surface is pubescent, densely but not scabrous punctured. The general aspect is that of certain *Hylobius*. The last ventral segment in both sexes is broadly channeled, and with a shallow impression each side; faint traces of similar impressions may be seen in Triglyphus.

The only species known to me is

P. tæniatus Lec., Pac. Rw. Expl. and Surv. Insects, 55, (*Hylobius?*)

Brownish black, thinly clothed with fine brown pubescence, opaque, densely scabrous punctured; thorax granose at the sides, feebly channeled, elytra with rows of deep oblong punctures, scutellum, two small spots on the fifth interspace, and a small sub-humeral spot pale yellow. Length 13 mm.; .55 inch.

Oregon and Vancouver Island.

ACMÆGENIUS n. g.

The beak is rather shorter and stouter than in the preceding genera, flat above, with a medial channel; the lateral grooves are represented by a short impression, and immediately below is a shorter one, the two together occupying the triangular space in front of the eyes; the antennal grooves are very strong and deep, the apical wings moderate; the tip is emarginate but the angulated line is replaced by a broad curved impression. The antennæ are stouter, first and second joints of the funiculus equal, each nearly twice as long as the following, which are equal and about as long as wide, with long bristles, seventh wider, club oval pointed.

Prothorax wider than long, narrowed in front but not behind, very densely punctured not granose, impressed beneath as usual; postocular lobes feeble. Elytra not much wider than the prothorax, elongate oval, strongly declivous behind, humeri not distinct; densely punctured, thinly clothed with mixed scales and hairs, with rows of deep oblong punctures.

Legs as in the preceding genera, except that all the tibiæ are more expanded at the tip, and the tarsi, instead of being brush-like beneath, are concave and thinly clothed with long bristles.

A. hylobinus, n. sp.

Dull black, with a brown tinge, produced by thinly dispersed hairs and small scales; head and prothorax very densely coarsely punctured, elytra more finely punctured, with rows of large oblong punctures: beneath, and legs densely punctured. Length 11 mm.; .43 inch.

Oregon, two specimens; the last ventral is obsoletely impressed along the median line.

TRICHALOPHUS n. g.

This genus contains several species resembling the European *Alophus*, but of larger size, with the rows of elytral punctures almost or quite obliterated; the upper surface is clothed with hairs, not at all squamose, and becoming so only on the sides of the sternal pieces; there is one lateral groove on the beak, and the medial groove is stronger than in *Alophus*;

the second joint of the funiculus is a little longer than the first, as in *Alophus*, and in all other respects it agrees with that genus,* The head and prothorax are densely punctured, the latter usually channeled and carinate, the anterior transverse impression strong, sometimes extending on the dorsal surface; the elytra are densely but more finely punctured; the tarsi are broad and scopiferous as usual.

The species may be thus distinguished:

Pronotum strongly transversely impressed near the tip; dorsal channel strong in front, carinate behind:
  Pronotum less coarsely punctured.............................. 1. **didymus.**
  Pronotum more coarsely punctured.............................. 2. **constrictus.**
Pronotum scarcely impressed near the tip:
  Lateral groove of rostrum distinct; pronotum carinate about the middle:
    Elytral striæ nearly obliterated.............................. 3. **alternatus.**
    Elytral striæ distinct.............................. 4. **seriatus.**
  Lateral groove of rostrum triangular feeble; pronotum neither channeled nor carinate; elytral striæ wanting.............................. 5. **simplex.**

The bibliography and localities as follows:

1. **T. didymus** (Lec.), Proc. Ac. Nat. Sc. Phila. vii., 20, (*Alophus*;) Pacific R. W. Expl. and Surv. Insects, p. 54.

Oregon.

2. **T. constrictus** (Lec.), ibid. (*Alophus*); ibid.‡; *A.alternatus*‡ Mann., Bull. Mosc. 1843, 290; ib. 1853, 244.

Alaska and Washington Territory. This is very similar to the preceding and may with larger series of specimens prove only a race thereof. The prothorax, however, seems more coarsely punctured, and consequently subserrate at the sides.

3. **T. alternatus.** *Hypsonotus altern.* Say, Curc. 10; ed. Lec. i., 271; *Alophus altern.* Boh., Schönh. Curc. ii., 286.

Lake Superior.

4. **T. seriatus** (Mann.), Bull. Mosc. 1853, 245, (*Alophus*).

Alaska.

5. **T. simplex,** n. sp.

Brownish black, clothed with pale brown prostrate pubescence; head, beak and prothorax densely not coarsely punctured, the latter with a stripe of denser pubescence each side, elytra more finely densely punctured. Length, 8.5 mm.; .32 inch.

Manitoba and Hudson Bay Territory. Smaller than the other species, and easily known by the lateral groove of the beak being shorter, broader, triangular and feebly impressed. The outer two striæ of the elytra are distinct, the others obliterated; the pubescence becomes squamiform on the sides of the prothorax beneath, and on the side pieces of the meso- and metasternum, as in the other species of the genus.

* In *Alophus* the lateral groove is wanting.

LOPHALOPHUS n. g.

In this genus the beak is parallel, flat above, not as stout as in the other genera, and the apical wings are not developed; the medial groove is replaced by a fine carina, and the lateral grooves are wanting; the antennal grooves are short, oblique as usual, but becoming wide and obliterated behind; the grooves on the under surface are obsolete. The antennæ are as in *Alophus*, but rather thicker; the second joint of the funiculus, as usual, a little longer than the first. The eyes are scarcely transverse, but distinctly angulated below; the postocular lobes are obsolete, and the prosternal transverse impression scarcely extends on the sides. The elytra and head are finely punctured, and the former has distinct rows of larger punctures; the prothorax is coarsely and densely punctured, not channeled, but with a small, dorsal smooth space. Under surface pubescent.

The only species known to me is

L. inquinatus. *Liophlœus inq.* Mann., Bull. Mosc. 1852, 351.

Alaska; two specimens from Baron Chaudoir. Differs from *Liophlœus* by the mandibles being without apical scar, by the maxillæ not covered by the mentum, and by the ungues being separate, not connate at base. Length 5.5 mm.; .22 inch.

LEPIDOPHORUS Kirby.

This genus is easily distinguished from the others of the sub-family by the beak being a little broader at the tip, with feeble wings, somewhat as in *Alophus;* otherwise, it is cylindrical, and not carinate nor grooved; the antennal grooves are broad and short, directed towards the eyes, which are scarcely transverse, and distinctly angulated below. The scape of the antennæ is longer than in the other genera, extending across the eyes; the first joint of the funiculus is as long as the three following united; 2–7 equal in length, gradually a little thicker; club oval, pointed. Prothorax not lobed in front, only obsoletely impressed at the sides near the tip; rounded on the sides in front, not narrowed behind, scarcely as wide as long. Elytra elongate oval, humeri rounded; striæ well marked, interspaces flat. Front and middle tibiæ slightly curved and mucronate at tip; the hind pair scarcely mucronate, truncate at tip.

1. **L. lineaticollis** Kirby, Faun. Bor. Am. iv. 201; Schön. Curc. vi, 2d, 256; Mann. Bull. Mosc. 1853, 243.

Two specimens from Alaska, not very well preserved. The body is densely clothed with scales and small bristles; the latter arranged in series on the elytra. Length 4.5 mm.; .18 inch.

This is perhaps *Phytonomus trivittatus* Say, Curc. p. 12; ed. Lec. i, 273; but the description is not very definite.

Sub-Family III. ITHYCERIDÆ.

This sub-family is represented by a single species, and is well distinguished from all other Curculionidæ by the following assemblage of characters.

Mandibles prominent, not very stout, emarginate at tip, with an inferior cusp; mentum large, quadrate, supported on a broad and short gular peduncle; ligula and labial palpi small. Beak short, rather broad, one-half longer than the head, antennal grooves wanting; eyes small, rounded, convex. Antennæ not at all geniculate. First joint scarcely longer than the second; third longer than the second; 4–8 gradually a little shorter and broader; club small, oval pointed, annulated. Side pieces of mesosternum diagonally divided; epimera not attaining the prothorax; those of metasternum moderately wide, slightly dilated in front. Ventral segments nearly equal in length; sutures straight, well-marked. Front coxæ contiguous, middle coxæ narrowly separated; hind coxæ transverse, narrow, attaining the side margin. Legs moderate in length, slender, tibiæ truncate at tip, with two small terminal spurs; articular surface terminal, well-defined. Tarsi broad, spongy, pubescent beneath; third joint deeply bilobed; claws divergent, armed at the middle with a small acute tooth.

Inner surface of elytra with the usual fold, commencing near the posthumeral sinuosity, running parallel to the margin as far back as the beginning of the apical curvature; apical region very finely scabrous, with a narrow marginal band of very fine golden pubescence.

In this sub-family the Curculionidæ make the nearest approach to the Rhynchitidæ.

ITHYCERUS Sch.

1. **I. noveboracensis** (Forster), Nov. Spec. Ins. 35, (*Curculio*); (Oliv.) Enc. Meth. v, 553; (Gmelin), Syst. Nat. 1798; Horn, Proc. Am. Phil. Soc. 1872, 447; *Rhynchites curculionoides* Herbst, Käfer, vii, 136; pl. 105, f. 1; *Ithycerus curc.* Gyll., Sch. Curc. i, 246; *Curc. punctatulus* Fabr., Ent. Syst. i, 187; Oliv., 83, 402, pl. 10, f. 119; Enc. Méth. v, 533; *Pachyrhynchus Schonherri* Kirby, Faun. Bor. Am. iv, 271.

Canada to Texas; sometimes quite injurious to fruit trees by gnawing off the tender buds, as is observed by C. V. Riley (Third Report Ins. Inj. Missouri, p. 57). The anal segment of the ♂, is very convex and protuberant, so as to be visible from beneath, simulating a ventral segment. We owe the first accurate observation and explanation of this fact to Dr. Horn. The pygidium is deeply grooved in both sexes, and projects beyond the elytra.

Sub-Family IV. CURCULIONIDÆ (genuini).

The species of this sub-family may be recognized by the mandibles being rarely emarginate at tip, but either bi-emarginate, with three apical cusps, or oblique, with three cusps on the inner side, which sometimes become effaced, or obsolete. In the first tribes the inferior cusp is also smaller, and less prominent, but it speedily becomes more developed, and it is by the final dominance of that cusp, with the edge of the mandible which corresponds to it, that the oblique form with the teeth on the inner edge, is assumed; and a still greater prominence of this inferior edge and cusp results in the oblique or flattened form of mandible seen in certain *Cryptorhyn-*

chini and *Barini*. From them the transition is easy to the next sub-family Balaninidæ in which the mandibles are still more depressed, and the condyle instead of being on the outer side comes to the upper surface, so that the movement is vertical, instead of horizontal as in all other Coleoptera.

It must also be observed that in certain *Phytonomini* the interior cusp becomes very small or obsolete, so that the mandibles seem to be only emarginate at tip. They thus approach the two preceding sub-families, but are readily known by not possessing the peculiar characters which distinguish each of them. The beak is not short and flat, and the eyes are not round, as in Sitonidæ; the gular margin is not prominent as in Alophidæ; and the antennæ are not straight, nor the claws appendiculate as in Ithyceridæ.

After eliminating the types which seem of sufficient importance to be regarded as having family or sub-family value, there still remains this vast complex, which presents no difficulty in circumscription. It nevertheless comprehends so many diversified combinations and representations of a few simple characters, and under each so many variations in a few definite directions, that much labor, and very careful observation is necessary to devise a scheme which will enable the genera to be naturally grouped, and easily recognized.

I believe that the following table will be found sufficient for the proper elucidation of our limited fauna, and perhaps with a certain amount of expansion and modification, may serve as a basis for a general arrangement of the sub-family.

Front coxæ contiguous [except in *Pissodes* (p. 142), *Phycocœtes* (p. 189), and *Miarus* (p. 221)] .... **2.**
Front coxæ distant [except in *Notolomus* (p. 222), and *Conotrachelus* (p. 225)] .... **14.**
2. Ungues simple; pygidium not exposed .... **3.**
" appendiculate, toothed or cleft, [except in some *Magdalis* (p. 192), and *Cionini* (p 219)] .... **9.**
3. Eyes not contiguous beneath .... **4.**
" contiguous beneath, (p. 320) .... **HORMOPINI.**
4. Mandibles bi-emarginate, and 3-toothed at tip .... **5.**
" usually emarginate, 2-toothed at tip, articular surface of at least the hind tibiæ terminal (p. 123) .... **PHYTONOMINI.**
5. Tibiæ fossorial (p. 137) .... **EMPHYASTINI.**
" not fossorial .... **6.**
6. Side pieces of metathorax distinct .... **7.**
" " indistinct (p. 190) .... **TRACHODINI.**
7. Lateral angles of first ventral segment not visible.. **8.**
" " " uncovered (p. 144).. **CLEONINI.**
7. Mentum transverse, labial palpi large (p. 137)..... **HYLOBIINI.**
" smaller, " " small (p. 160)...... **ERIRHININI.**
9. Ventral sutures straight .... **10.**
Ventral sutures angulated at the sides .... **12.**

10. Prothorax contiguous to the elytra. .... **11.**
Prothorax pedunculate (p. 191)................ **OTIDOCEPHALINI.**
11. Hind angles of prothorax acute (p. 192)..... **MAGDALINI.**
" " " " rectangular or rounded (p. 193).................................. **ANTHONOMINI.**
12. Funicle six or seven-jointed..................... **13.**
" five-jointed (p. 219)...................... **CIONINI.**
13. Scape extending upon the eyes (p. 210). ..... **PRIONOMERINI.**
" not extending upon the eyes (p. 211). **TYCHIINI.**

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14. Ventral sutures more or less curved.......... **14.**
" " entirely straight (p. 223).... **LÆMOSACCINI.**
15. Humeri of elytra truncated by side pieces of mesothorax (p. 284).,........................ **BARINI.**
Humeri not truncated........................... **16.**
16. Beak received in or upon the breast.......... **17.**
Beak not received in or upon the breast; prosternum very long in front of the coxæ, which are nearly contiguous (p. 221)...... **DERELOMINI.**
17. Eyes more or less covered in repose, except in the group *Phytobii* (p. 280)............... **18.**
Eyes not covered................................... **19.**
18. Body oval, pygidium covered (p. 223)........ **CRYPTORHYNCHINI.**
" broad, pygidium exposed (p. 267)...... **CEUTORHYNCHINI.**
19. Antennæ geniculate, eyes very large (p. 259) **ZYGOPINI.**
" straight (p. 265)....................... **TACHYGONINI.**

Tribe I. PHYTONOMINI.

Among the tribes in which the ungues are simple and separate, and the pygidium not exposed, the present one may be distinguished by the form of the mandibles, and by the hind tibiæ being truncate at tip, with the articular surface terminal, and though somewhat oblique, not lateral as in Hylobiini. It follows from this that the terminal spine representing the spur is situated on the inner side of the apical surface.

The mentum is oblong, and supported on a gular peduncle which is not longer than wide, and emarginate. The ligula and labial palpi are less developed than in Hylobiini; the maxillæ are entirely exposed. The mandibles are short, very stout, pincer-shaped, emarginate at tip, (except in *Phytonomus opimus*) convex and sparsely sculptured on the outer surface, the basal condyle large. Antennæ inserted near the tip of the beak, geniculate; scape long, club elongate-oval, pointed, annulated, covered with sensitive surface; funiculus 7-jointed; the seventh joint in some species connected with the club. Beak moderately long, not slender, antennal grooves extending nearly to the tip, deep, directed towards the lower part of the eyes, which are more or less transverse and narrowed beneath. Front coxæ round; contiguous; middle coxæ round, narrowly separated, entirely en closed by the meso- and metasternum. Side pieces of mesosternum diagonally divided; of the metasternum, narrow dilated in front, the outer angle making a sinuosity in the side margin of the elytra. Ventral segments unequal; first and second longer; third and fourth shorter; fifth as long as the two preceding united; sutures straight; the lateral angles of the first segment are covered by the elytra, and the intercoxal process is broad.

The proportions of the ventral segments permit the recognition of two groups.

A. Ventral segments not very unequal; postocular lobes of prothorax obsolete	**Phytonomi.**
Articular surface of hind tibiæ well-defined, terminal.	PHYTONOMUS.
Articular surface of hind tibiæ ill-defined, oblique...	LEPYRUS.
B. Ventral segments very unequal; third and fourth short, united equal to one of the others	**Listroderi.**
Tibiæ strongly mucronate; second joint of funiculus much longer than the first	LISTRONOTUS.
Tibiæ feebly mucronate; first joint of funiculus as long as, or but little longer than the second	MACROPS.

PHYTONOMUS Sch.

A. Beak short and thick, 1st and 2d joints of funiculus equal	1. opimus.
B. Beak longer and more slender, 1st joint of funiculus stouter and frequently longer than second:	
Elytra much wider than base of prothorax	2.
" scarcely " " "	2. elongatus.
2. Prothorax pubescent without scales	3.
" scaly with long hairs intermixed	3. setigerus.
" scaly without hairs, scales very small	5.
3. Pubescence coarse	5. pubicollis.
" very fine	4.
4. Pubescence mottled, elytra tesselated	6. Castor.
" pale-green, nearly uniform	7. nigrirostris.
5. Scales golden-brown, sides of prothorax rounded..	4. comptus.
Scales dirty-gray, sides of prothorax nearly straight	8. quadricollis.

1. P. opimus, n. sp.

Robust, black, densely finely punctured, and covered with gray scales, having a metallic lustre ; sparsely and indistinctly pubescent. Beak one-half longer than the head, stout, curved, antennal grooves deep; suddenly flexed downwards ; there is a small oblique groove each side near the tip, a short nasal furrow, and another between the eyes which are transverse. The funiculus of the antennæ has the first joint nearly as long as the second, which is nearly equal to the three following united. Prothorax subquadrate, a little wider than long, rounded on the sides in front, and feebly constricted ; disc very obsoletely channeled. Elytra much wider than the prothorax, one-half wider than long, convex, humeri prominent, striæ with large shallow punctures, interspaces somewhat convex, first, third and fifth a little more prominent. Tibiæ not mucronate, not even the front pair. Length 7.6 mm. ; .3 inch.

One specimen from Pennsylvania given me by Dr. Melsheimer, under the name adopted ; another from Canada. The mandibles are oblique, and not emarginate at tip.

I should refer this species to *Cephalalges*, but the eyes are not approximate above as described in that genus. It belongs, however, to the group *Donus* Capiomont, and seems related to the Canarian *P. irroratus* Wollaston. I am not at all certain that it properly belongs to our fauna.

2. **P. elongatus** Gyll , Sch. Curc. ii, 374 ; Schiödte, Berl. Ent. Zeitsch. 1859, 141, Cap. l. c. 1868, 193 ; *Curculio elong.* Paykull, Fauna Suec. iii, 236.

One specimen from Greenland, kindly sent me by Mr. Chr. Drewsen. Belongs to Capiomont's sixth group *Phytonomus.*

3. **P. setigerus,** n. sp.

Moderately elongate, black, densely clothed with yellow-brown scales, and long pale hairs, which on the elytra are arranged in rows ; prothorax strongly rounded on the sides, widest at the middle, with two broad darker discoidal stripes, and a spot each side in front ; elytra with the alternate spaces tesselated with dark-brown, and frequently with a large quadrate common dark spot at the base ; first joint of funiculus of antennæ one-half longer than the second. Length 5.5 mm. ; .22 inch.

Kansas, two specimens. Larger and stouter than the next, and easily known by the hairs intermixed with the scales, and by the funiculus of the antennæ longer and more slender, with the first joint conspicuously longer than the second.

This species is allied to the European *P. Pollux*, but the prothorax is wider in front and more rounded on the sides, and the setæ of the elytra are much longer and more obvious.

4. **P. comptus** Say, Curc. 12 ; ed. Lec. i, 274 ; Gyll., Sch. Curc. ii, 384 ; *P. diversus* Gyll., ibid. ii, 371; Cap., Ann. Ent. Fr. 1868, 163.

Missouri and Canada. Has been observed by Mr. Riley to form a cocoon similar to that of European species. Belongs to Capiomont's third group *Erirhinomorphus.*

5. **P. pubicollis**, n. sp.

Less elongate, blackish, head and prothorax pubescent, with gray hairs, more coarse on the latter; front narrow, with a deep fovea behind the eyes. Prothorax not longer than wide, a little wider at the middle, narrower in front than at base, rounded on the sides; strongly and densely punctured, indistinctly trivittate. Elytra one-third wider than the prothorax, oval, truncate at base, humeri rounded ; striæ punctured, clothed with depressed hair-like scales, and a very few intermixed short hairs ; gray, tesselated with brown and black ; a quadrate dark spot at the base, extending to the second stria, as in *P. setigerus*, and the European *P. Pollux*. Antennæ piceous, first joint of funiculus but little longer than the second. Tibiæ and tarsi testaceous. Length .5 mm.; 20 inch.

Vancouver Island, one specimen. Very like several European species, but easily distinguished by the coarse pubescence of the prothorax unmixed with scales. The last joint of the funiculus is closely attached to the club.

6. **P. Castor**, n. sp.

More elongate, blackish, head and prothorax very finely pubescent with gray hair; front wider, with a fovea behind the eyes. Prothorax a little longer than wide, a little wider at the middle, narrower in front than at base, rounded on the sides, densely punctured, trivittate with white. Elytra one-third wider than the prothorax, oblong oval, humeri rounded, striæ punctured; clothed with very small scales so deeply bifurcated as to resemble fine hairs; also with rows of very short pale setæ; gray, varied with brown, and tesselated with small black spots; the darker quadrate basal spot is not very distinct. Antennæ with the first joint of the funiculus about one-third longer than the second. Legs blackish. Length 5 mm.; 20 inch.

Canada, one specimen. More elongate than the European *P. Pollux*, and easily distinguished by the finely pubescent prothorax and the rows of short setæ of the elytra. The last joint of the funiculus is quite separate from the club. The scales of the elytra are very small and quite peculiar in form, giving the appearance of very fine hairs arranged by pairs.

7. **P. nigrirostris** Gyll., Sch. Curc. ii, 393; Cap., Ann. Ent. Fr. 1868, 227; *Rhynchænus nigr.* Fabr., Syst. El. ii, 428, &c., &c.

This common European species occurs in Canada and in Massachusetts. It belongs to Capiomont's seventh group *Phytonomidius*, in which the first joint of the funiculus is much longer than the second, which is not longer than the third.

8. **P. quadricollis**, n. sp.

Blackish-brown, covered with a very dense coat of dirt colored small rounded scales, mixed with a few very short sub-erect hairs, which form rows upon the elytra. Beak as long as the prothorax, cylindrical, about three times as long as wide, glabrous, and nearly smooth at tip, which is reddish-brown; feebly carinate; frontal fovea small, distinct. Eyes oval transverse, not narrowed beneath, not prominent. Prothorax nearly square, very slightly narrowed in front, sides scarcely rounded, base feebly rounded; sculpture concealed by the scales. Elytra more than half wider than the prothorax, oblong oval; humeri abruptly rounded, sides then parallel, rounded at tip; striæ impressed, punctured, punctures almost concealed by the scales; interspaces nearly flat, third a little more convex. Antennæ brown, first joint of funiculus as long as the two following; second very little longer than the third. Length .5 mm.; .20 inch.

One specimen from Dacota, Mr. E. P. Austin. Very different from the other species by the nearly square prothorax. The ventral segments are not very unequal, and the fifth is but little longer than the fourth, so that it is truly a Phytonomus.

LEPYRUS Sch.

The position of this genus seems to me to have been greatly misinterpreted. Lacordaire has placed it next to *Hylobius*, from which it differs in the form of the mandibles which are emarginate simply, as in *Phytonomus*; in the size and shape of the mentum, which is oblong and rather large; in the development of the ligula and palpi, which are much smaller than in *Hylobius*, and finally in the form of the articular surface of the tibiæ, which is in *Lepyrus* oblique, and in *Hylobius* and allies quite lateral.

In my opinion, *Lepyrus* is a gigantic *Phytonomus*, with scarcely any generic characters to separate it, except the less transverse eyes and the oblique terminal surfaces of the tibiæ. The habits of the species well agree with this view, as they are found on plants, or on the ground, while the *Hylobii* occur only under bark.

Three species occur in our fauna.

Elytral striæ composed of large punctures.................... 2
" " feeble, alternately approximated, interspaces roughly granulate.......................-............ 1. **gemellus.**
2. Elytra finely pubescent with gray hairs, marked each with a white spot .... 2. **colon.**
Elytra thinly clothed with very small yellow scales, each with a yellow spot.................................... 3. **geminatus.**

1. L. **gemellus** Kirby, Faun. Bor. Am. iv, 198, pl. 5, f. 7; Mann., Bull. Mosc. 1852, ii, 351.

Hudson Bay Territory and Alaska.

2. L. **colon** Gyll., Sch. Curc. ii, 330; Boh., ib. vi, 2d, 295; Kirby, Faun. Bor. Am. iv, 197; *Curculio colon* Linn., Mant. 531; cum synon. plur. Europ.

Hudson Bay Territory.

3. L. **geminatus** Say, Curc. 12; ed. Lec. i, 273.

Illinois to Colorado. Differs from *L. colon* by the elytra clothed with small narrow yellow scales instead of fine gray hairs, and also by the elytra being separately acuminate at tip instead of conjointly rounded.

LISTRONOTUS Jekel, Ann. Ent. Fr. 1864, 565.

This genus includes all the larger North American species heretofore classed under *Listroderes*, and a few moderate sized or small species; in some of the latter the beak becomes cylindrical, and only feebly carinate, so that they resemble in appearance *Phytonomus*. They are, however, easily distinguished by the different proportions of the ventral segments; the first, second and fifth being long, and the third and fourth very short. The legs are more slender than in *Phytonomus*, the tibiæ bent inwards at the tip, and tolerably strongly mucronate. The side pieces of the metasternum are narrower than in *Phytonomus* and are strongly produced inwards at the front part. In some of the species I have observed curious sexual characters in the ventral segments, but in others no difference is seen. The metasternum is long, and the species, so far as I know, are winged.

The anal segment of the ♂ is frequently so convex as to project behind the last ventral, so as to become visible from beneath. There is an elongated surface on the inside of the elytra, extending along the margin, for the apical fourth of the length, which is perhaps a stridulating plate. I have found a somewhat similar arrangement in other genera, but the full investigation of the subject must be deferred to another time.

The relations of the antennal joints enable the species to be arranged in two groups:

A. Funiculus of antennæ slender, third joint somewhat longer than the fourth; second joint twice or thrice as long as the first.

Sub-apical callus of the elytra very prominent	2.
“ “ “ “ less prominent	4.
“ “ “ “ not prominent	5.
2. Beak carinate and sulcate	3.
Beak nearly cylindrical; lateral grooves obsolete	3. **tuberosus.**
3. Elytra with darker oblique mark..........	1. **obliquus.**
“ uniform dirty brown..........................	2. **sordidus.**
4. Humeri rounded, base of elytra feebly emarginate	4. **squamiger.**
Humeri oblique, base of elytra deeply emarginate.........................	5. **callosus.**
5. Elytra obliquely declivous behind................	6.
“ compressed and vertical behind...........	8. **americanus.**
6. Humeri rounded..	6. **inæqualipennis.**
“ oblique	7. **caudatus.**
Sides of prothorax strongly rounded.............	9. **rotundicollis.**

B. Funiculus of antennæ less slender, third and following joints rounded, equal, second joint nearly three times as long as the first; posterior callus of elytra feeble.

Head clothed with hair-like scales; beak slightly flattened above, more or less carinate and sulcate	2.
Head clothed with rounded scales......................	9.
2. Prothorax distinctly longer than wide...........	3.
“ not “ “ “	6.
3. Scales of prothorax smaller than those of elytra	4.
Scales of prothorax larger than those of elytra	10. **appendiculatus.**

4.	Beak stout, strongly carinate and sulcate.......	11. **sulcirostris**
	" as usual, slightly " " "	5.
5.	Frontal fovea obsolete ; form more elongate..	12. **nebulosus.**
	" " deep ; " less " ..	13. **frontalis.**
6.	Prothorax intricately rugose, sub-granulate, with scattered large punctures	14. **oregonensis.**
	Prothorax deeply, coarsely and densely punctured	7.
7.	Sides of prothorax broadly rounded.............	8.
	Sides " strongly "	16. **cribricollis.**
8.	Beak feebly carinate and sulcate, frontal fovea faint........	15. **latiusculus.**
	Beak strongly carinate and sulcate, frontal fovea deep...	17. **impressifrons.**
9.	Setæ of ordinary length	10.
	" longer and clavate.................................	18. **setosus.**
10.	Frontal fovea deep, punctiform..................	11.
	" " obsolete	12.
11.	Color mottled..	19. **punctiger.**
	" nearly uniform	20. **teretirostris.**
12.	Prothorax longer than wide, not vittate.........	21. **gracilis.**
	" more rounded and broader, vittate	22. **nevadicus.**

1. L. **obliquus**, n. sp.

Black, densely clothed with small rounded scales, which become larger on the prothorax, and narrower, smaller and hair-like upon the head. Beak as long as the prothorax, stout, slightly curved, carinate, distinctly sulcate at the side ; frontal fovea deep. Prothorax nearly square, sides parallel for three-fourths the length; then suddenly rounded and narrowed at the apex; sides and narrower dorsal line pale-brown, disc, flanks and apical spots each side darker; surface with large scattered blackish dots. Scutellum pale. Elytra broadly emarginate at base, humeri oblique, gradually narrowed on the sides, obliquely declivous behind, subapical callus very prominent, conical, obtuse ; striæ finely impressed, coarsely punctured, interspaces broad and flat; the scales are brown on the disc from the base for two-thirds the length, and from the suture to the third stria ; also upon the inflexed flanks and near the callus ; elsewhere they are pale-brown, and there is an oblique dark stripe upon the fourth and fifth interspaces in front of the middle ; the setæ are very sparse and short. Beneath the scales are of the darker brown tint, with a few large blackish punctures similar to those upon the prothorax. Length 9.2 mm. ; .36 inch.

♀. Last ventral segment with a short deep channel at the tip ; each elytron prolonged at the apex into a short conical process. ♂ unknown.

Two ♀ ; Texas; Belfrage.

2. L. **sordidus** (Gyll.), Sch. Curc. ii, 280, (*Listroderes*); ? *L. distinguendus* Gyll., ibid. ii, 281.

♂. First ventral segment flattened at base; anal segment projecting beyond the last ventral, and visible from beneath; elytra not prolonged at tip.

♀. Last ventral segment feebly channeled at the apex; elytra conjointly prolonged at tip.

Massachusetts to Georgia. Length 8 mm.; .31 inch.

I know not why Gyllenhal placed this species among those in which the third—seventh joints of the funiculus are nodose; they are in reality as slender and subturbinate as in any of his first division. The synonym seems to differ from the type only by smaller size and slightly irregular elytral puncturing; similar variations occur in other species.

3. L. **tuberosus**, n. sp.

Black, densely clothed with yellowish-brown rounded scales, which become larger on the prothorax, and hair-like upon the head. Beak as long as the prothorax, stout, cylindrical, carina and grooves obsolete, frontal fovea feeble. Prothorax as wide as long, sides nearly parallel, suddenly rounded and narrowed near the tip, indistinctly trivittate with pale and sprinkled with large distinct black dots. Scutellum pale. Elytra at base broadly emarginate, humeri oblique, so that they become one-third wider than the prothorax, sides gradually narrowed behind the widest part; posterior callus large, conical, prominent; striæ punctured, interspaces wide nearly flat; scales uniform in color, very dense, setæ very short. Beneath of the same color as above, hind thighs with a pale band. Length 7 mm.; .28 inch.

♂. First ventral segment flattened at base, anal segment protuberant beyond the fifth ventral and visible from beneath; elytra rounded at tip.

♀. Last ventral segment feebly impressed near the tip, each elytron prolonged at tip into a long straight process.

Michigan to Georgia. Easily known by the absence of the carina and grooves of the beak, which are so obvious in the two preceding species.

4. L. **squamiger** (Say), Curc. 11; ed. Lec. i, 271, (*Listroderes*); Gyll. Sch. Curc. ii, 279, Boh., ibid. vi, 189, partim.

♀. Last ventral with two strongly elevated folds at the tip, converging towards the front, but not meeting, presenting the appearance of a deep excavation; pygidium feebly channeled, rather pointed at tip; elytra separately acuminate, but not prolonged at tip; ♂ wanting.

One ♀, Georgia. Length 9.7 mm.; .38 inch. The posterior callus of the elytra is oblong, moderately prominent, but not a conical tuberosity as in the three preceding species, since it graduates imperceptibly into the fifth interspace.

The ♀ mentioned by Boheman in the last citation belongs to this species, the supposed ♂ with caudate elytra is a ♀ variety of *L. inæqualipennis*.

5. L. **callosus**, n. sp.

Blackish, densely clothed, as in the other species, with small rounded scales, becoming larger on the prothorax, and hair-like upon the head, they are dirt colored on the general surface of the body, but pale at the sides of the prothorax and elytra, and on a narrow dorsal vitta of the former. Beak as long as the prothorax, distinctly carinate and sulcate, prothorax scarcely as wide as long, broadly rounded on the sides, gradually narrowed in front of the middle, marked as usual with scattered black dots. Scutellum pale. Elytra strongly emarginate at base, humeri oblique; striæ strongly punctured, interspaces wide, somewhat convex; posterior callus rather prominent, oblong, fading in front into the fifth and adjoining interspaces. Beneath dirty brown speckled with black punctures. Length 9–10.5 mm.; .35–.42 inch.

♂. Last ventral segment not impressed, anal segment very slightly visible behind the last ventral.

♀. First and second ventrals with a broad shallow impression, last ventral with a deep round excavation extending from the base to the tip; pygidium semi-circularly emarginate at tip; elytra separately subacuminate at tip.

New York to Georgia. The posterior callus of the elytra is about as prominent as in *L. squamiger*, but not so narrow.

6. L. **inæqualipennis** (Boh.), Sch. Curc. vi, 189, (*Listroderes*).

♂. Ventral segments first and second broadly concave at the middle, fifth not impressed, anal segment convex and protuberant behind the last ventral; elytra conjointly rounded at tip.

♀. Last ventral with two strongly elevated folds at tip, converging anteriorly but not meeting, leaving between them a deep excavation; pygidium somewhat pointed at tip; elytra separately prolonged at tip into a long straight pointed process.

Middle and Southern States. Closely allied to the next, but easily distinguished by the sexual characters and by the elytra being but slightly emarginate at base, with rounded humeri, as in *L. squamiger*. Length 7–11 mm.; .275–.43 inch.

7. L. **caudatus** (Say), Jour. Ac. Nat. Sc. Phila. iii, 311; ed. Lec. ii, 174, (*Rhynchænus*); Gyll., Sch. Curc. ii, 278 (*Listroderes*).

♂. Last ventral segment not impressed, anal segment slightly visible behind the last ventral, elytra rounded at tip.

♀. Last ventral broadly but feebly concave towards the tip; pygidium not pointed at tip; elytra separately prolonged into apical processes which converge at tip.

Western States.

8. L. **americanus**, n. sp.

Blackish, covered with round dirty-brown scales, becoming larger on the prothorax, less dense and hair-like upon the head and beak. Beak as long as the prothorax, strongly carinate and sulcate. Prothorax scarcely as long as wide, rounded on the sides, narrowed before the middle, constricted towards the tip; marked with two sinuous lateral vittæ, and a scarcely distinct dorsal line of pale scales. The punctures are less concealed by scales than in the species above described, and are very coarse and dense. Scutellum pale. Elytra strongly emarginate at base, humeri oblique, sides then parallel, rounded behind; the posterior callus is distinct, not very prominent; the elytra are compressed at the suture towards the tip, and vertically declivous; the striæ are strongly punctured, the interspaces somewhat uneven; there is an indistinct broad stripe commencing at the humeri and running backwards on the sixth, seventh, and eighth interspaces, and there are besides some irregular mottlings of pale scales. Beneath punctured, irregularly spotted with large pale scales; thighs with a pale band. Length 14 mm.; .55 inch.

♀. Last ventral deeply concave, the excavation smooth at the bottom, and transversely impressed with a short line, becoming narrow at the tip, which is deeply emarginate; the upper marginal line is continued around the tip, separate from the lower one, and the space between them is curiously and deeply marked with two excavations on each side near the extreme emargination; pygidium strongly emarginate; tips of the elytra separately rounded. ♂ wanting.

Georgia, three specimens. I have seen nothing similar to the curious sculpture of the last ventral segment, though in its homology it is only a modification and complication of the forms mentioned under other species. It is the *Eudocimus americanus*† Dej. Cat. 299, but bears no resemblance to *Eu. Mannerheimii.*

9. **L. rotundicollis**, n. sp.

Blackish, covered with the usual scales, of a dirty-brown; beak feebly carinate, lateral grooves almost obsolete; frontal fovea distinct. Prothorax as wide as long, sides strongly rounded, clothed with paler scales; surface coarsely and densely punctured; an indistinct paler dorsal stripe may also be traced. Elytra with deep punctured striæ, and convex interspaces; posterior callus obsolete. Length 7.5 mm.; .30 inch.

♀. Last ventral with a large shallow rounded impression; elytra conjointly rounded at tip. ♂ wanting.

One ♀, Georgia. Quite distinct by the more rounded prothorax. The funiculus of the antennæ is as slender as in any of the preceding species; the setæ of the elytra are rather more conspicuous.

10. **L. appendiculatus** (Boh.), Sch. Curc. vi, 2d, 192, (*Listroderes*).

♂. Elytra conjointly rounded at tip.

♀. Elytra separately produced into a short straight process.

Canada to Texas. More elongate than any other species in which the beak is flattened and subcarinate. Length 4.2–6.5 mm.; .16–.25 inch.

11. **L. sulcirostris**, n. sp.

Elongate, black, less densely covered with small, rounded, dirty brown scales, no larger on the prothorax. Beak stouter than usual, with the ridges and grooves so strongly marked as to appear tricarinate and quadrisulcate. Prothorax longer than wide, sides nearly straight for two thirds the length, then gently rounded to the apex; punctures dense, unequal, the larger ones more distant. Elytra broadly emarginate at base, one-fourth wider than the prothorax, humeri rounded; striæ strongly punctured, interspaces slightly convex, conjointly rounded at tip in both sexes. Length 8 mm.; .32 inch.

♂. Last ventral not impressed.

♀. " " with a broad, shallow impression.

One pair of partially abraded specimens: Georgia. Easily known by the stouter and more deeply sculptured beak, and stouter antennæ; otherwise it resembles *L. nebulosus* in form.

12. **L. nebulosus**, n. sp.

Elongate, blackish, clothed with scales, mottled brown and dark, on the head with a metallic lustre. Beak feebly carinate and sulcate as usual. Prothorax longer than wide, sides feebly rounded for two-thirds the length, then more rounded to the tip; scales small, a bifurcated lateral vitta, and an interrupted dorsal line paler; punctures dense and deep. Elytra about one-fourth wider than the prothorax, strongly emarginate at base, humeri oblique, slightly rounded; striæ strongly punctured, interspaces wide and flat. Thighs with a pale band. Length 9.5 mm.; .375 inch.

♀. Last ventral slightly impressed; elytra conjointly rounded at tip.

One ♀, Missouri. Easily recognized by the elongate form and mottled color.

13. **L. frontalis**, n. sp.

Blackish, less elongated, covered with rounded scales, which are no larger on the prothorax; these scales are dirty brown on the elytra, and with a metallic lustre on the head and prothorax. Beak finely carinate, lateral grooves almost obsolete, frontal fovea deep. Prothorax very little longer than wide, broadly rounded on the sides, transversely impressed near the tip; lateral stripes and dorsal line indistinctly paler, punctures dense, of two sizes, the larger more distant. Elytra one-third wider than the prothorax, broadly emarginate at base, humeri rounded; striæ strongly punctured, interspaces wide, nearly flat; tip conjointly rounded in both sexes. Length 5.7–10 mm.; .23–.40 inch.

♂. Last ventral not impressed; anal segment slightly prominent.

♀. Last ventral with three shallow impressions.

Michigan, New York, Georgia, Texas. Stouter than *L. nebulosus*, and easily recognized by the above characters. The setæ of the elytra are more obvious than usual.

14. **L. oregonensis** Lec., Pac. R. R. Expl. and Surv. Ent 55.

One abraded ♀ from Oregon. The last ventral segment is not at all impressed. The beak is feebly carinate, and obsoletely sulcate, the frontal fovea not deep. The prothorax is a little wider than long, much rounded on the sides, and feebly channeled, the sculpture is peculiar, consisting of small granules, separated by deep rugosities, and mixed with large, scattered punctures; on each granule is a small puncture; the few scales which remain are small, and indicate three paler stripes. The elytra are one-third wider than the prothorax; the humeri are rounded, and the base slightly emarginate; striæ strongly punctured, interspaces slightly convex. Length 6 mm.; .23 inch.

15. L. **latiusculus** (Boh.), Sch. Curc. vi. 2d. 199.

I refer this name to a species which occurs in the Middle and Southern States, and is by no means rare. The form is less elongate than in *L. appendiculatus*, and the prothorax is a little wider than long, slightly narrowed in front, and feebly rounded on the sides; the punctures, on removal of the scales, are large, deep and densely placed; the scales are of the usual dirt color, not conspicuously varied in color, though the prothorax is indistinctly trivittate, and larger upon the prothorax than upon the elytra. Elytra about one-third wider than the prothorax, slightly emarginate at base, humeri appearing rounded when viewed from above, but oblique when viewed from the front; striæ strongly punctured, interspaces slightly convex; setæ short, tip conjointly rounded in both sexes. The last ventral segment is not impressed in ♀. Length 5—6 mm.; .20—.24 inch.

16. L. **cribricollis**, n. sp.

This species agrees in form, color and sculpture with the preceding, except that the prothorax is very distinctly wider than long, and more strongly rounded on the sides; it is distinctly constricted near the tip, so that looking from above, the postocular lobes appear more prominent. The humeral angles of the elytra are more distinctly oblique. Length 6.7 mm.; .27 inch.

♀. Last ventral with a large round impression, the bottom of which is shining and nearly smooth.

One ♀, Georgia. In this as in the preceding species, the beak is but faintly sulcate, and the middle carina is slightly marked; the frontal fovea is small, and feebly impressed.

17. L. **impressifrons**, n. sp.

This species entirely resembles *L. latiusculus*, in form and sculpture, but the beak is stouter, more distinctly carinate and sulcate, and the frontal fovea is large and deep. The last ventral is not impressed in ♀. Length 5.8 mm.; .23 inch.

Two specimens, Georgia and Louisiana. The prothorax is very deeply and coarsely punctured, and the sides are broadly rounded.

18. L. **setosus**, n. sp.

Blackish, covered with a dense crust of dirty gray and brownish round scales, larger upon the prothorax, and not becoming hair-like upon the head. Beak moderately tricarinate and quadrisulcate. Prothorax distinctly wider than long, sides suddenly rounded near the base and apex. Scutellum pale. Elytra not much wider than the prothorax, slightly emarginate at base; humeri rounded, striæ punctured, interspaces slightly convex, with rows of clavate bristles longer and more evident than the setæ of the other species; tip conjointly rounded in both sexes.

♂. Last ventral slightly impressed at the tip.

♀. Last ventral deeply impressed at the tip.

Florida and Georgia: Messrs. Hubbard and Schwarz. Very easily recognized by the scaly head and long clavate bristles.

19. L. **punctiger**, n. sp.

Elongate covered with small round scales of brownish gray and brown mottled, and slightly pearly, not larger on the prothorax, and but little smaller on the head. Beak cylindrical, neither carinate nor sulcate; frontal fovea punctiform deep. Prothorax longer than wide, scarcely narrower in front, broadly rounded on the sides, with a wide lateral pale stripe, which is bifurcated in front; the sculpture is concealed by the scales, but as usual a few large scattered punctures are seen. Scutellum pale. Elytra nearly one-half wider than the prothorax, humeri oblique and slightly rounded, base broadly emarginate; striæ strongly punctured; interspaces wide nearly flat, setæ quite obvious, but not stouter than usual; tip conjointly rounded. Last ventral segment not impressed. Antennæ and legs dark brown. Length 5.7 mm.; .23 inch.

Dacota: one specimen. This species and the next are more elongated in form than any others here described, except *L. appendiculatus*.

20. L. **teretirostris** Lec. Pac. R. R. Expl. and Surv. Ent. 55.

San Francisco, Cal. Precisely similar in form to the preceding. but the beak is a little stouter and very feebly carinate and sulcate; the frontal fovea is punctiform, but not so deep; the scales are of a uniform pale mud color, with slight metallic lustre, and are scarcely mottled with darker. The last ventral segment is impressed at the tip.

21. L. **gracilis**, n. sp.

Precisely similar to *L. teretirostris* in form, size and color, but the beak is more slender, as in *punctiger*, and neither carinate nor sulcate; it differs from both by the absence of the frontal fovea. The prothorax is entirely uniform in color, and the elytra slightly mottled towards the tip. Length 5.3 mm.; .21 inch.

One specimen, Nevada: E. P. Austin. The last ventral is feebly impressed at tip, as in the preceding.

22. L. **nevadicus**, n. sp.

Less elongate, covered densely with dirt colored scales, without lustre.. Head covered with smaller scales, beak cylindrical, very feebly carinate and sulcate, frontal fovea wanting. Prothorax not longer than wide, more rounded at the sides, and slightly constricted in front; narrow lateral stripes, and a dorsal line of paler scales. Elytra one-third wider than the prothorax, broadly emarginate at base, humeri rounded, striæ punctured, interspaces wide, nearly flat, setæ as in the three preceding species. Last ventral segment impressed at the tip. Length 4 mm.; .16 inch.

Nevada, E. P. Austin: three specimens. Quite distinct from *L. gracilis* by the less elongate form and more rounded sides of prothorax. The sculpture of the prothorax is concealed by the scales as usual, so that I cannot compare it as fully as I desire with *L. oregonensis*, which it resembles in form. The latter, however, has the last ventral not impressed (♀), and has probably the head clothed with hair-like and not round scales.

I have one specimen of the same, or a very similar species from Texas, sent by Belfrage. The scales are, however, in great part abraded, and although I perceive some differences, I am unwilling to indicate it as distinct.

MACROPS Kirby.

The smaller species placed by Schönherr in *Listroderes* were separated by Mr. Jekel as a distinct genus, *Hyperodes* (Ann. Ent. Fr. 1864, 566), and undoubtedly the separation is a proper one. I find, however, that the two species upon which Mr. Kirby founded his genus *Macrops* (Fauna Bor. Am. 199), belong to the same set, and that name must therefore have precedence.

This genus is easily distinguished from the preceding by the tibiæ being stouter and less strongly mucronate at tip, and by the first joint of the funiculus being stouter and as long as the second, except in *M. solutus*, where it is about two-thirds as long as the second; the seventh joint of the funiculus is wider than the sixth, but is quite distinct in most of the species, though in others it is rather closely connected.*

It will be seen that in the characters by which this genus differs from *Listronotus* it approaches *Phytonomus*. The greatest differences will be found, however, in the proportion of the ventral segments, which in the last named genus are not very unequal, while in *Macrops* the third and fourth are very evidently shorter, and together are not longer than each of the others.

The species are closely allied and difficult to distinguish. The descriptions of Boheman and Gyllenhal, though minute, are not sufficient to enable me to identify their species with reasonable certainty, and I therefore content myself with giving a list of those named in the books with references, awaiting more abundant material and comparison with the described types for a proper tabulation of the species:

1. **M. delumbis** (Gyll.), Sch. Curc. ii., 283.
2. **M. lineatulus** (Say), Curc. ii; ed. Lec. i, 272; (Boh.), Sch. Curc. vi, 2d, 195.
3. **M. sparsus** (Say), Curc. ii; ed. Lec. i, 271; (Gyll.), Sch. Curc. ii, 282; *Listr. squalidus* Gyll., ibid. ii, 181.
4. **M. spurcus** (Boh.), Sch. Curc. vi, 2d, 196.
5. **M. immundus** (Boh.), Sch. Curc. vi, 2d, 198.
6. **M. humilis** (Gyll.), Sch. Curc. ii, 284; *M. maculicollis* Kirby, Faun. Bor. Am. iv, 200; pl. 8, f. 4.
7. **M. porcellus** (Say), Curc. ii; ed. Lec. i, 271; (Gyll.), Sch. Curc, ii, 284.
8. **M. vittaticollis** Kirby, Faun. Bor. Am. iv, 200.
9. **M. solutus** (Boh.), Sch. Curc. vi, 2d, 197.

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* The anal segment of the ♂ is usually protuberant; the last ventral is impressed in some ♀ ♀, but never very deeply. The form of the beak, the size of the scales, and the length of the setæ afford good characters for the recognition of many of the species, of which there are probably fifteen to seventeen in my collection.

In this species, which is easily known by the denuded transverse black spot, sometimes becoming a band, about the middle of the elytra, the second joint of the funiculus is longer than the first, and the tibiæ are more slender and more bent at the tip than in the others, thus establishing a passage to *Listronotus*.

Tribe II. EMPHYASTINI.

This tribe is evidently closely related to *Hylobiini*, and agrees with it in the structure of the mouth, but differs from it, as from all other tribes in our fauna, by the peculiar form of the tibiæ, which are fitted for digging.

The front tibiæ are compressed, slender, sub-sinuate, prolonged beyond the articulation of the tarsus into a broad process, rounded at tip, and concave beneath; the spur is small and straight; the middle tibiæ are roughly tuberculate and setose, with the apical margin repand, dilated on the outer side, and armed with a straight fixed spur at the inner side; the hind tibiæ are bent outwards, tuberculate and setose; much thickened towards the tip, with very large and acutely margined corbels. Tarsi sparsely setose beneath, and not spongy; third joint not dilated nor bilobed; fourth joint moderate in size, claws slender, simple and divergent.

The antennæ are geniculate; funiculus 7-jointed; first joint longer; 2–7 gradually broader, forming a perfoliate stem uniting with the club, which is oval, annulated and pubescent. Beak stout, shorter than the prothorax, deeply grooved; antennal grooves extending to the eyes, which are small, nearly round, and coarsely granulated.

Prosternum not emarginate beneath; front coxæ contiguous, middle ones slightly separated, metasternum short, side pieces narrow, hind coxæ rather large, oval, widely separated, extending to the elytral margin. Thighs stout, unarmed. Ventral segments unequal; third and fourth united equal to the second or fifth; sutures straight, the first obliterated at the middle.

The above characters are drawn from *Emphyastes*. The Australian genus *Aphela* only differs by the legs being less stout; the tibiæ less expanded or thickened towards the tip, and by the beak not being grooved.

EMPHYASTES Mann.

1. **E. fucicola** Mann., Bull. Mosc. 1852, ii, 354; Lec., Pac. R. W. Expl. & Surv. Ins. 57, pl. 2, f. 8; Lacordaire, Gen. Col. Atlas. pl. 71, fi. 5.

Sea Coast of the Pacific, from Alaska to San Diego; under sea-weed cast up by the waves. The figure of the antenna given by Lacordaire is very incorrect.

This species varies greatly in size, but I have observed none intermediate between the large and small varieties. Length 4.8–6 mm.; .19–.24 inch.

Tribe III. HYLOBIINI.

The mandibles in this tribe have two apical teeth, of which the lower one is a little shorter; there is besides a cusp on the inner edge, so that they becomes three-toothed. This normal form is preserved through many of the following tribes, modified only by the greater development of the inferior edge and cusp, which by assuming more prominence gives finally an oblique form to the mandible. The gular peduncle is longer than wide, a little wider in front, truncate anteriorly; the mentum is transverse, not large, and the palpi are rather more developed than in the following tribes. The beak is rather long, not slender, except in *Pissodes*, and the antennal grooves do not extend to the tip. Eyes transverse. The antennæ are geniculate; scape long, funiculus 7-jointed, club oval, pointed, annulated, entirely pubescent and sensitive, except in *Pissodes*, where the first joint is smooth and sub-glabrous.

The front coxæ are contiguous and the cavities confluent, except in *Pissodes*, where they are slightly separated. The middle coxæ are not widely separated; the side pieces of metasternum diagonally divided, with the epimera triangular, not attaining largely the base of the prothorax. Side pieces of metasternum narrow, slightly dilated in front. Hind coxæ widely separated, attaining the lateral margin, or nearly so.

Ventral segments unequal, first, second and fifth longer; sutures straight and deeply impressed, except the first which is finer and sometimes slightly sinuate. Pygidium covered by elytra.

Legs stout, or strong; tibiæ armed with a strong hook at tip; articular face lateral; terminal edge of hind tibiæ double, except in *Pissodes;* tarsi with third joint dilated, spongy beneath; claws simple, divergent.

The species are of moderate size, never very small, and are sub-cortical in their habits; they mostly infest coniferous trees.

This tribe leads directly to the Erirhinini, from which they differ chiefly by the less delicately organized mouth, and generally stronger and coarser structure, and by the double edge or corbel to the terminal margin of the hind tibiæ. This character, common in Otiorhynchidæ, now reappears for the last time in the present family.

These corbels are very large and wide in *Pachylobius*, but narrow in the other genera.

	Mesosternum moderately long	2.
	" very short	Plinthus.
2.	Front coxæ contiguous	3.
	" " slightly separated	Pissodes.
3.	Thighs clavate, strongly toothed	4.
	" feebly clavate, not toothed	6.
4.	Tibiæ of usual form	5.
	" short and very thick	Pachylobius.
5.	Body with spots of fine pubescence	Hylobius.
	" " " small scales	Hilipus.
6.	Eyes small, elytra oval, convex	Hypomolyx.
	" larger, elytra elongate, parallel	Eudocimus.

PLINTHUS Germ.

A single species of this genus, which is easily recognized by the very short metasternum, occurs in Oregon and Alaska. It is very roughly sculptured and tuberculate. The thighs are slightly clavate, sinuate beneath near the tip, and armed with a small tooth. The tibiæ slightly curved, not very stout, not compressed, strongly sinuate on the inner side, and serrate from the middle to the tip. The first joint of the funiculus is longer than the second; 2–7 gradually a little stouter, rounded in form; club small, oval pointed, pubescent.

1. **P. carinatus** Boh., Sch. Curc. vi, 334; Mann., Bull. Mosc. 1852, 352; *Heilipus scrobiculatus* Mann., ibid. 1843, 292, (♀).

The ♂ is smaller and narrower than the ♀ and has the abdomen broadly and deeply concave in front. The color is blackish brown, and in well preserved specimens the elytra are mottled with spots of yellow-brown small narrow hair-like scales. Length 6–9 mm; .24–.43 inch.

HYPOMOLYX n. g.

Body elongate, ovate, broader behind, proportioned nearly as in the Alophidæ (*Thricalophus*). Beak as long as the prothorax, rather stout, slightly curved, coarsely punctured with deep triangular anteocular groove at the side, and three faint carinæ above; antennal grooves extending to the lower edge of the eyes, which are transverse, rather small, and not very finely granulated. Prothorax without postocular lobes, prosternum broadly emarginate in front, and fringed with long yellow ciliæ. Mesosternum as long as the first ventral segment. Ventral segments less unequal than in the other genera; fifth but a little longer than fourth; first suture obtusely angulated at the middle. Thighs scarcely clavate, sinuate beneath near the tip, not toothed; tibiæ slender, feebly sinuate on the inner side, armed with a strong apical hook. The first and second joints of the funiculus are elongate and equal, 3–6 rounded, shorter; seventh broader and larger, almost forming part of the club, though less so than in *Hylobius*.

1. **H. pinicola.** *Hylobius pinicola* Couper, Trans. Lit. and Historical Soc. Quebec, 1864.

Lake Superior, Hudson Bay Terr., Canada. Mentioned by me in Agassiz Lake Superior, as *Hylobius heros*, but not described. A fine species, with the prothorax rather small, sub-serrate on the sides, very coarsely punctured, thinly clothed with coarse hair, carinate in front; the elytra densely punctured, mottled with small spots of yellow hair; striæ composed of large elongate deep punctures. Length 13.5 mm; 5.3 inch.

PACHYLOBIUS n. g.

I have separated as a distinct genus *Hylobius picivorus*, which differs greatly from the other species by the tibiæ being much shorter and stouter, and expanded at the tip, so that the corbels or surface included by the double edge on the outer apical margin is much wider than in the other genera of the tribe. The beak is as long as the prothorax, rather stout, not curved, feebly sulcate in front of the eyes, antennal grooves attaining the middle of the eyes, which are large, transverse, and not finely granulated. Antennæ stout, funiculus with rather short joints, becoming gradually broader, seventh forming part of the club, first and second joints very little longer than the following ones. Mesosternum a little longer than the first ventral, which is longer than the second; first suture broadly angulated at the middle. Thighs clavate, very strongly toothed. Prosternum broadly emarginate in front, and fringed with long yellow ciliæ; postocular lobes feeble. Legs stout, thighs clavate, sinuate beneath, and armed with a large tooth; tibiæ suddenly dilated, strongly sinuate on the inner side above the middle and expanded at tip, corbels broad, smooth, lateral terminal hook very large. Mandibles quite different in form from those of the other genera, flattened, so that the tooth which is inferior in the other genera becomes anterior; the under surface is slightly concave, the upper one feebly convex, and the inner margin is obtusely 3-toothed.

1. **P. picivorus** *Liparus pic.* Germ., Ins. Nov. 311; *Hylobius pic.* Boh., Sch. Curc. ii, 340.

Abundant under pine bark, in the Southern States, less frequent in the Middle States.

HYLOBIUS Sch.

The genus as here restricted, will contain only those species in which the mandibles are normal in form, the antennæ stout, with the seventh joint of the funiculus broader and forming part of the club; the eyes are rather large and transverse; the anteocular grooves are broad and shallow. The postocular lobes are large, and the prosternum deeply emarginate in front and fringed. The metasternum is as long as the first ventral. The thighs are clavate, sinuate beneath and strongly toothed; tibiæ slender, sinuate on the inner side, corbels narrow; terminal hook strong. The second and fifth ventral segments are each as long as the third and fourth united, and the first suture is broadly angulated at the middle.

1. **H. pales** Boh., Sch. Curc. ii, 340; *Curculio pales* Herbst, Käfer, vii, 31; pl. 99, f. 10; *Pissodes macellus* Germ., Ins. Nov. 319; Harris, Ins. Inj. veg. ed. ult., 70, (larva).

Lake Superior to Florida, abundant under pine bark. The head is very densely, though not coarsely punctured, and is nearly opaque; the prothorax is coarsely and rugosely punctured. The pubescence of the elytral spots is sometimes yellow, sometimes gray. Length 6.8–10.2 mm.; .27–.4 inch.

2. **H. confusus** Kirby, Fauna Bor. Am. iv, 196.

Lake Superior. Closely resembles the smaller varieties of the preceding, but the head is shining, and less densely and rather more coarsely punctured. The punctures of the prothorax are also less confluent, and the surface less plicate. The pubescence is nearly white. Length 6.8 mm.; .27 inch.

3. **H. assimilis** Boh., Sch. Curc. ii, 345.

Unknown to me; described as larger than *H. pales* with the head distantly punctured, and the elytra without spots of pubescence. Perhaps identical with *H. confusus*, in which case the name has precedence.

4. **H. stupidus** Boh., Sch. Curc. ii, 339.

Georgia. Unknown to me; quite distinct by the narrow and feebly punctured elytral striæ.

HILIPUS Germ.

This genus, largely developed in tropical America, is represented by a single rare species found in Georgia and Florida. Except that the species of this genus are mottled with spots of very small white scales, not hairs, and that the seventh joint of the funiculus is not connected with the club, the differences between it and *Hylobius* are rather comparative than absolute.

The beak is cylindrical, and more curved, without anteocular grooves; the antennal grooves terminate at a greater distance from the mouth; the eyes, postocular lobes and emargination of the prosternum are similar. The thighs are equally clavate, and sinuate beneath, but the tooth is much larger and broader; the tibiæ are compressed, bent inwards, equally strongly armed with a terminal hook, but much less sinuate on the inner side. The first ventral suture is deeper, and more strongly angulated at the middle. The sculpture is much coarser and sparser, and the spaces between the large punctures are smooth and polished.

H. squamosus (Lec.), Ann. Lyc. Nat. Hist. New York, i, 171; pl. xi, f. 101 (*Pissodes*); Boh., Sch. Curc. iii, 161.

Georgia and Florida, under pine bark. A beautiful black insect, with a broad white lateral vitta on the prothorax, and a very irregular one on the elytra, with many scattered small spots, densely clothed with depressed, very small, round, chalky white scales. Punctures of elytra very large, distant, interspaces smooth, shining, except where covered with scales. Length 14.4 mm.; .57 inch.

EUDOCIMUS Sch.

The beak in this genus is cylindrical, nearly straight and as long as the prothorax; there are no anteocular grooves; the antennal grooves reach the middle of the front margin of the eyes, which are large and transverse. The first and second joints of the funicle are elongated and equal; 3–7 shorter, gradually a little wider, club elongate oval, annulated pubescent. Prosternum fringed in front and broadly emarginate, postocular lobes broad. Metasternum as long as the first ventral; third and fourth ventrals together equal to the second or fifth; first suture nearly straight. Legs slender, thighs unarmed, tibiæ straight, not compressed, armed with a strong terminal hook.

Eu. Mannerheimii Boh., Sch. Curc. iii, 241.

New York to Georgia: rare. A conspicuous species of elongate form, clothed with small brown scales; the prothorax striped with pale, and the elytra with conspicuous pale spots on the fourth interspace, which is also clouded with black. Length 10.5—.15 mm.; .41—.6 inch.

PISSODES Germ.

The species of this genus have almost the appearance of small *Hylobius*, but differ remarkably by the following characters:

The beak is more slender, cylindrical, without anteocular grooves; eyes small, nearly round; antennæ with the funiculus more slender, and the greater part of the club shining, sparsely pubescent, and destitute of sensitive surface, not distinctly annulated; prosternum not emarginate in front, without postocular lobes. Metasternum as long as the first ventral; third and fourth ventrals together shorter than second; first suture obliterated at the middle and widely angulated. Front coxæ slightly separated by the prosternum; legs rather slender, thighs not toothed, tibiæ straight, slightly compressed, terminal hook strong, but proceeding rather from the outer than inner part of the apex of the tibiæ; corbels wanting.

I am not satisfied with the position of this genus, and am disposed to believe that it should be placed as a separate tribe. Thomson (Skand. Col. vii, 218) associates it with *Trachodes*, but there does not appear to me any resemblance between the two. The definition of his tribe *Pissodina* does not at all apply to *Trachodes*, in which the metasternum is very short, and the club of the antennæ entirely pubescent and sensitive.

These insects live under bark of pine trees, and are sometimes very injurious. There are evidently several species in our fauna, but the differences are not very obvious, and it is quite possible that a careful comparison with foreign species might reduce the number now recognized as distinct.

Prothorax broader than long, more suddenly narrowed in front, and more strongly constricted, slightly bisinuate on the sides; dorsal carina distinct; alternate interspaces of the elytra more elevated...........	2.
Prothorax not broader than long, more gradually narrowed in front, and feebly constricted; broadly rounded on the sides, dorsal carina variable..........	3.
2. Elytra with a broad posterior transverse band of yellow pubescence, becoming white towards the suture; prothorax less coarsely rugosely punctured. .	1. **strobi.**
Similarly colored; prothorax more coarsely and less rugosely punctured; alternate interspaces more distinctly elevated	2. **costatus.**
Prothorax more densely, less rugosely punctured, outer striæ of elytra less distinct............................	3. **fasciatus.**
3. Hind angles of prothorax rectangular....................	4. **affinis.**
" " " obtuse..........................	5. **dubius.**
" " " rounded......	6. **rotundatus.**

1. **P. strobi** Peck, Mass. Agr. Journ. 1817, iv, 205, (*Rhynchænus*); Say, Curc. 14; ed. Lec. i, 227; Harris, Ins. Inj. Veg. ed. ult., 72; *Pissodes nemorensis* Germ., Ins. Nov. 318.

Lake Superior to Georgia. I can see no reason for considering the two names to represent distinct species, as has been done by Gemminger and Harold, and by Crotch.

2. **P. costatus** Mann., Bull. Mosc. 1852, ii, 363.

Alaska and Oregon. A beautifully preserved specimen from California, which I refer to this species on account of its form and sculpture, has the sides of the prothorax clothed with snow-white scales, and the posterior band of the elytra very broad, becoming white towards the suture, just as in the preceding species. In the other species the scales seem to be all yellow, and the markings much smaller.

3. **P. fasciatus,** n. sp.

Blackish-brown, thinly sprinkled with yellowish hairs and small scales; beak strongly punctured, slender, not carinate; prothorax not wider than long, gradually narrowed in front, broadly rounded on the sides, distinctly broadly constricted at tip, hind angles rectangular; disc densely and confluently punctured, obsoletely carinate, sides clothed with yellow scales, narrow dorsal line and four small spots in the usual position yellowish; elytra with a broad band before and another behind the middle yellowish, the latter whitish towards the suture; inner striæ deeply and irregularly punctured, outer ones less distinct, interspaces densely rugosely punctured, third and fifth slightly prominent. Length 7–9 mm.; .28–.35 inch.

Two specimens, Oregon. Seems to differ from *P. strobi* chiefly by the thorax being longer, less coarsely punctured, and less rounded on the sides; by the beak being somewhat stouter, and by the elytral bands more transverse and less oblique towards the sides.

4. **P. affinis** Randall, Bost. Journ. Nat. Hist. ii, 24.

Lake Superior, Canada, and New Hampshire. Distinct from the preceding species by the prothorax narrower, and less constricted in front; from the two following species by the hind angles being rectangular. The disc of the prothorax is coarsely and somewhat rugosely punctured, much as in *P. costatus*, but the striæ are composed of larger punctures, and the interspaces are quite flat. The scales are all cream color, and the posterior band is narrow and imperfect.

5. **P. dubius** Randall, Bost. Journ. Nat. Hist. ii, 24.

Same range as the preceding, from the smallest specimens of which it differs chiefly by the sides of the prothorax converging a little near the hind angles, which thus become somewhat obtuse. There is also some difference in the scales on the elytra, which in well-preserved specimens are more diffused, with the markings less defined.

6. **P. rotundatus,** n. sp.

This species quite resembles in size and form *P. dubius*, except that the sides of the prothorax are more rounded behind, so that the basal angles become still more obtuse and rounded. The prothorax is more densely punctured, and the alternate interspaces of the elytra are slightly elevated;

the transverse white spot behind the middle is small, and placed nearer the middle than in the other species. Length 5.7 mm.; .225 inch.

One specimen, Lake Superior.

Tribe IV. CLEONINI.

The character which distinguishes this from all neighboring tribes, is that the elytra are less extended on the flanks of the metathorax and abdomen, so that the lateral angles of the first ventral segment become visible.

The body is never very stout, and frequently is almost linear. The gular peduncle is sometimes short, sometimes long, emarginate at tip; mentum large, flat; ligula feebly or not prominent; palpi much less developed than in *Hylobiini*. Tibiæ more or less mucronate at tip; articular surface lateral; corbels wanting; claws connate at base, or at least approximate. Antennæ sometimes feebly geniculate; joints of funicle gradually broader; club elongate oval, annulated, pubescent and sensitive.

The other characters are variable. The beak is either short and thick, or long and cylindrical; the tarsi are dilated and spongy beneath, with the third joint broad and bilobed, or only hairy, with the third joint shorter and emarginate. The first and second ventral segments are long and connate; in the elongate species the other segments are moderately long; in the species with thick short beak they are shorter. The antennæ are inserted at a variable distance from the tip of the beak.

Sexual differences are not apparent in the short beaked species; in some of the elongate forms the beak is longer in the female.

Gradational characters are observed in the form of the beak, antennæ, tarsi and claws, varying by almost insensible degrees, so as to render the classification of this tribe very difficult. After several efforts, I am only able to offer the following table for the identification of the genera I have examined:

Beak flat, stout, more or less grooved, somewhat dilated at tip; prothorax angulated on the sides near the tip, then suddenly constricted. Antennæ rather stout, feebly geniculated; ventral segments 3–5 shorter than in the subsequent genera. Tarsi usually not spongy beneath, in which case the third joint is emarginate, not bilobed...	2.
Beak cylindrical, rather stout, not dilated at tip; prothorax usually not angulated at the side; ventral segments 3–5 not so short; tarsi usually spongy beneath, claws connate at base..	4.
Beak cylindrical, varying in length, generally smoother than in the preceding genera; antennæ less approximate to the tip; prothorax not angulated at the sides: ventral segment 3–5 not very short; tarsi spongy beneath, third joint broad, bilobed; claws connate at base; second joint of funicle equal to first..	LIXUS.

2. Prosternum without spines in front of the coxæ, 3.
Prosternum armed with short spines in front of the coxæ.............................. CENTROCLEONUS.
3. Beak strongly carinate, third joint of hind tarsi not spongy beneath..................... STEPHANOCLEONUS.
Beak feebly carinate, third joint of hind tarsi broad, spongy beneath................ CLEONOPSIS.
4. Hind tarsi with third joint shorter, emarginate, not spongy beneath................. CLEONASPIS.
Hind tarsi with third joint broader, bilobed, spongy beneath.. .... CLEONUS.

CENTROCLEONUS n. g.

Body oblong, more robust than usual in this tribe, above very coarsely sculptured. Beak stout, somewhat longer than the head, a little wider at tip, usually carinate, and broadly bisulcate above, tip not emarginate; antennal grooves suddenly deflexed, commencing not very near the tip. Mentum large, flat, gular peduncle very short and broad; neck finely transversely striate, with a deep median groove; eyes transverse, acute beneath, finely granulated. Antennæ geniculate, scape slender, equal to funiculus, which has six distinct joints, first and second nearly equal, third to sixth shorter, rounded, seventh forming part of the club. Prothorax wider than long, sides parallel, suddenly and strongly angulated near the tip, which is then strongly narrowed and constricted; postocular lobes broad, fringed; prosternum flattened, with an acute tubercle in front of each coxa; there are also two small prominences between the coxæ. Mesosternum shorter than first ventral; intercoxal process of abdomen broad rounded; 3-5 segments together scarcely longer than second. Legs moderate, terminal hooks of tibiæ small; tarsi hairy but not spongy beneath; hind tarsi with second joint a little shorter than first, third one-half shorter, deeply emarginate; claws approximate, not connate.

Conspicuous by the form of the prothorax, and very rough sculpture of upper surface. The species are rare, and may be distinguished as follows:

Elytra coarsely punctato-striate.......... .... 2.
" more finely " " ; beak not carinate......... **4. molitor.**
2. Pubescence intermixed with short hairs.............. ..... 3.
" " " long " ; alternate interspaces of elytra elevated.......... .... **1. pilosus.**
3. Beak strongly carinate.. **2. angularis.**
" feebly " .... **3. porosus.**

1. C. pilosus, n. sp.

Black, upper surface of beak, and above the eyes, sides of prothorax, and greater part of elytra densely clothed with gray hair, intermixed with long erect yellowish hairs; head and beak coarsely punctured, the latter with two broad grooves and an obtuse median carina; prothorax covered with large very deep foveæ, sub-carinate at the middle and depressed at base, sides broadly subsinuate; elytra with rows of very large punctures, alternate interspaces elevated; two transverse denuded bands reach neither suture nor margin; beneath gray pubescent, with black dots. Length 11.5 mm.; .45 inch.

California: one specimen, given me by Mr. A. Murray.

2. **C. angularis.** *Cleonus ang.* Lec. Col. Kansas, p. 18, pl. 1, f. 12.

Kansas: specimens in my collection and in Dr. Horn's differ from the preceding by the hairs intermixed with the pubescence being short; the beak is more strongly carinate, the sides of the prothorax less sinuate, and the alternate interspaces of the elytra scarcely elevated.

3. **C. porosus**, n. sp.

Black, clothed with grayish and yellowish pubescence, with short hairs intermixed; beak coarsely punctured, with a feeble short carina at the middle, and two short shallow grooves; sides of prothorax nearly straight behind the postapical angle; elytra with rows of very large punctures, interspaces scarcely unequal; two indistinct darker transverse bands. Length 11.5 mm.; .45 inch.

One specimen, Cape San Lucas, Lower California, Mr. Xantus. The elytral striæ are composed of larger and less approximate punctures than in *C. angularis.*

4. **C. molitor.** *Cleonus molitor* Lec. Proc. Acad. 1853, 78.

California and Arizona. The pubescence is very dense, and scale like, not mixed with hairs, and is very easily abraded. The sculpture is much less coarse than in the other species, and the postapical angles of the prothorax are less prominent.

STEPHANOCLEONUS Motsch.

The essential characters of this genus consist in the prosternum without spines in front of the coxæ, the postapical angles of the prothorax obtuse or rounded, not at all prominent as in *Centrocleonus*; the antennæ are stout, feebly geniculate; first joint of funiculus longer, second only equal to the third, seventh forming part of the club. Beak rather stout, strongly carinate; tarsi hairy beneath, not spongy (except the third joint of the front and middle-pairs); hind tarsi with first and second joints elongated, third shorter, emarginate, not bilobed, claws connate at base.

Humeri obliquely truncate.. 1. **plumbeus.**
Humeri rounded.. 2. **cristatus.**

1. **S. plumbeus**, n. sp.

Black, thinly clothed with nearly uniform whitish fine pubescence, producing a leaden lustre; beak stout, shorter than the prothorax, strongly carinate, carina extending upon the head, but not to the tip of the beak; broadly sulcate each side, separated from the head by a transverse concavity, confluently and finely punctured, lateral space in front of the eyes with a few very large punctures. Prothorax quadrate, suddenly narrowed near the tip, and transversely impressed at the sides, postocular lobes scarcely fringed, postapical angles rounded, sides nearly parallel, base broadly emarginate in two arcs of a circle, middle angle not rounded; disc finely densely punctured with large scattered punctures, darker at the middle than at the sides, carinate in front of the middle but impressed behind. Elytra with humeri obliquely truncate, base not concave, sides subsinuate, obliquely prolonged behind, surface densely finely punctured, striæ composed of moderate sized punctures, with faint indications of two oblique bands, and a small denuded polished spot near the tips, which are separately rounded, or subacute. Length 9–11 mm.; .35–.45 inch.

North shore of Lake Superior; New Mexico. I have inadvertently mentioned this species in the list of Coleoptera of Lake Superior as *C. obliquus*, a European species which is quite different.

2. **S. cristatus**, n. sp.

Black, densely, finely punctured, clothed with white pubescence; beak strongly carinate, carina ending anteriorly in a fovea, prolonged backwards upon the head, broadly and deeply sulcate each side, lateral edges acute, well defined, upper surface sparsely, sides more densely coarsely punctured. Prothorax of the same form as in the preceding, but the postocular lobes have a short fringe of hair, the sides are nearly straight and parallel, the base is less emarginate, and the basal and medial angles are less prominent; the pubescence seems denser at the sides than on the disc; sculpture as in *S. plumbeus*. Elytra with striæ of smaller and more approximate punctures; humeri not obliquely truncate, but rounded and not prominent, sides feebly rounded, not subsinuate, less distinctly obliquely prolonged near the tips which are conjointly, not separately rounded; traces are seen of two dark oblique bands. Length 13 mm.; .50 inch.

One specimen, Utah, Dr. Horn. Easily known by the well defined lateral edge of the beak, and the different form of the elytra. The pubescence is less fine and more dense than in *S. plumbeus*.

CLEONOPSIS n. g.

I have been obliged to separate as a distinct genus, one species found in Texas and Colorado, which differs from *Cleonus* by stouter and flatter beak, the form and method of coloration, and by the joints of the funiculus of the antennæ, 2–6 being more closely united. It differs from *Stephanocleonus* by the hind tarsi broader, the third joint not shorter, deeply bilobed, with the lobes spongy beneath. I cannot identify it with any of the numerous genera mentioned by Mr. Chevrolat, though it would quite possibly enter into one of them.

1. **C. pulvereus.** *Cleonus pulv.* Lec. Col. Kansas and New Mexico, 18..

Three specimens. A rather stout species, proportioned somewhat like *C. trivittatus*, but with the prothorax suddenly tubulate in front, with a very broad discoidal black stripe, wider behind, and three oblique dark spots on each elytron. The beak is a little more than twice as long as wide, very coarsely punctured, feebly carinate, with slight traces each side of two grooves; the second joint of the funiculus is shorter than the first, but somewhat longer than the third. The basal margin of the elytra is much thickened and elevated, the base just behind the margin is impressed. The scutellum is quite evident, and rather narrow. The base of the prothorax is obliquely emarginate each side, and the middle lobe longer than usual, with the angle rounded.

CLEONUS Sch.

Although the following species differ in minor details of structure, which by some entomologists are regarded as of generic value, there is such a general resemblance in appearance and in the more important characters, that it seems more natural to regard them as constituting one genus. I am the more confirmed in this belief from the impossibility of placing them with any satisfaction in the groups established on the species of the other continent, themselves very indefinite in extent.

I would therefore include under this head all the species in our fauna in which the beak is stouter than in *Lixus*, but not dilated at tip; the gular peduncle is not so broad and short as in the preceding genera, but is shorter than in *Lixus;* there is a difference between the species in this character, it being longer in proportion to the increasing slenderness of the beak. The front and middle tarsi are broad, the third joint at least spongy and bilobed; the hind tarsi are hairy beneath in the first division, but broad and spongy in the second. The general tendency of the pubescence is to form longitudinal stripes, and not transverse or oblique bands. The body is elongated, resembling *Lixus*.

Our species may be thus tabulated:

A. Hind tarsi with third joint incompletely spongy beneath, deeply emarginate, feebly bilobed. APLEURUS Chevr.

	Prothorax gradually narrowed towards the tip...	2.
	" suddenly narrowed towards the tip; sides sub-sinuate...	1. collaris.
2.	Beak moderately strongly carinate; front not impressed.................................	3.
	Beak less strongly carinate; front transversely impressed.................................	4.
3.	Beak feebly carinate; front not impressed; elytra with broad black sutural and discoidal vittæ, speckled with white.......................	2. trivittatus.
	Elytra uniformly clothed with yellowish pubescence..........	3. inornatus.
4.	Elytral vittæ irregular.......................	4. frontalis.
	" " narrow, regular..................	5. virgatus.
5.	Elytra pubescent with the first, second, sixth and seventh interspaces darker..............	6. quadrilineatus.

B. Hind tarsi with third joint spongy, broad, deeply bilobed.

Prothorax carinate before the middle..........	3.
" not carinate before the middle......	2.

2. Pubescence short, pruinose.................. 7. **canescens.**
" longer and coarser....,.. .... 8. **puberulus.**
3. Prothorax sparsely coarsely punctured........ 9. **carinicollis.**
" cribrate ; elytral punctures approximate 10. **vittatus.**
Prothorax sparsely cribrate; punctures distant 11. **sparsus.**

1. **C. collaris**, n. sp.

Black, thickly clothed with short dirt-colored pubescence ; beak not dilated at tip, sides suddenly deflexed, nearly flat above, with a very fine slightly elevated line, gradually becoming impressed in front, and not reaching the tip, ending behind in a small frontal fovea. Prothorax wider than long, sides irregularly rounded, bent obliquely inwards near the base, suddenly rounded and narrowed near the apex, which is bisinuate, and strongly impressed at the sides ; disc sparsely cribrate, obsoletely carinate before the middle, very deeply excavated behind, sides with a curved impression which makes the outline sinuate when viewed from above. Elytra each with a deep rounded sub-basal impression, and an oblique lateral one at about one-fourth of the length ; striæ composed of large somewhat distant punctures, which appear somewhat unequal in size, as they are more or less covered with the pubescence ; the first and marginal interspaces seem to be tesselated with darker. Beneath clothed with dirt-colored pubescence and speckled with black. Length 11 mm.; .45 inch.

One specimen from Colorado. Dr. Horn. The front and middle tarsi are spongy beneath, with the third joint broad and bilobed ; the hind tarsi are not spongy, the third joint is shorter than the second, but scarcely wider, and deeply emarginate rather than bilobed.

2. **C. trivittatus** Say, Curc. 10 ; ed. Lec. i, 270 ; Germ., Sch. Curc. ii, 222.

Colorado, rare.

3. **C. inornatus**, n. sp.

Black, head densely punctured with a few coarse punctures, beak coarsely punctured, the latter distinctly carinate, and marked with two vittæ of pale-brown hair ; prothorax longer than wide, gradually narrowed from the base forwards, feebly rounded on the sides, not constricted and but feebly impressed on the sides towards the tip ; base bisinuate, middle lobe broadly rounded ; disc densely punctured, sparsely and very coarsely punctured, broadly but not deeply foveate at base, distinctly carinate in front of the impression, with four stripes of pale-brown hair, the discoidal ones being sinuate, the outer ones lateral. Elytra without impression, humeri rounded, sides parallel, striæ composed in front of rather distant punctures, but becoming definitely impressed toward the tip ; densely clothed with rather coarse pale brown pubescence, which is a little thinner on the second and eighth interspaces. Beneath similarly pubescent, speckled with black. Length 13.5 mm. ; .53 inch.

One specimen. Owen's Valley, California, Dr. Horn. The hind tarsi are rather wider than in *C. collaris*, and the third joint is more distinctly bilobed, with a portion of each lobe spongy beneath. The same character is seen in *C. trivittatus*.

4. **C. frontalis**, n. sp.

Black, densely punctured, head sparsely, beak coarsely punctured, the latter uniformly pubescent with yellowish-gray hair, cylindrical, obsoletely carinate, broadly concave transversely at base ; prothorax not longer than wide, gradually narrowed and feebly rounded from the base, which is bisinuate, with the middle lobe acute, tip not constricted, feebly impressed at the sides ; disc with four broad stripes of pubescence, and with scattered very coarse punctures, not distinctly carinate, basal impressions oval, not very deep. Elytra with three broad basal impressions, humeri rounded, sides parallel, striæ composed of large distant punctures ; densely clothed with moderately fine yellowish-gray pubescence, with a broad sutural and another discoidal stripe more thinly pubescent, speckled with denser spots. Beneath similarly pubescent, thickly speckled with black. Length 9 mm.; .36 inch.

Wyoming Territory, Dr. W. A. Hammond; Nevada, Dr. Horn. Smaller and more slender than *C. trivittatus*, and quite distinct by the above characters. The third joint of the hind tarsi is rather bilobed than emarginate, and is spongy at the tip of the lobes. The frontal concavity is broad and vague, and separates the head from the beak.

One specimen has the beak distinctly carinate, and the frontal impression much deeper, but does not otherwise differ.

5. **C. virgatus**, n. sp.

Black, densely punctured, head sparsely, beak coarsely punctured, thinly pubescent, sub-carinate, with a broad transverse frontal impression ; prothorax a little longer than wide, 4-vittate with pubescence, gradually narrowed from the base, scarcely rounded on the sides, very coarsely cribrate, finely carinate, basal impression very feeble, base deeply bisinuate, middle lobe acute. Elytra without impressions, striæ composed of large equal not distant punctures, tolerably densely pubescent, with the second, sixth, and eighth interspaces thinly pubescent, and therefore darker. Beneath rather coarsely pubescent and speckled with black. Length 7 mm.; .28 inch.

One specimen, Owen's Valley, California, Dr. Horn. The third joint of the hind tarsi is bilobed, and spongy beneath, but is shorter than the second joint.

6. **C. quadrilineatus.** *Apleurus quadr.* Chevrolat, Mem. Acad. Liége, 2d ser. v. 80.

Texas. In this species the pubescence is fine, the beak stouter and shorter, feebly carinate, with a small frontal fovea, the upper surface densely pubescent, the sides black. The prothorax very coarsely and sparsely punctured, the interspaces finely punctulate; the disc is dark, with the sides and two narrow lines converging in front cinereous; base broadly impressed at the middle, oblique each side, not acute at the scutellum. Elytra rather finely punctato-striate, with two cinereous vittæ occupying the third, fourth, and fifth, and three outer interspaces, apices separately rounded, and slightly acuminate. Hind tarsi with the third joint not broader than the second, bilobed, not spongy beneath. Length 8.75–11.8 mm.; .35–.46 inch.

7. **C. canescens**, n. sp.

Black, clothed with extremely fine and short, almost pruinose pubescence. Beak very stout, slightly thickened at tip, shorter than the prothorax, coarsely punctured, strongly carinate; carina abbreviated one-fourth from the tip, which is not emarginate, ending behind in a frontal puncture. Prothorax a little wider than long, sides nearly parallel, suddenly rounded and narrowed at the tip, which is feebly impressed at the sides, base broadly bisinuate, middle lobe feebly angulated, basal angles obtuse and rounded, disc densely punctulate, sparsely and very coarsely punctured, basal concavity deep, extending nearly to the middle. Elytra with rounded humeri, a little wider than the prothorax, sides parallel, then obliquely narrowed, tip obtusely rounded, semicircularly deeply impressed around the scutellum, which is small and deeply placed, front end of suture elevated, forming a small cusp; striæ composed of large distant punctures, interspaces flat, scarcely wider than the space between the individual punctures of the rows, slightly mottled with dots of denser whitish pubescence, and spots of a darker color. Beneath more coarsely and densely gray-pubescent, with large black punctures. Hind tarsi longer than the others, first joint longer than the second, third broader, bilobed, with the lobes spongy beneath, broadly grooved at the middle. Length 10 mm.; .40 inch.

Colorado. Four specimens given me by Mr. Ulke. The beak is thicker than in the neighboring species, and it is otherwise easily recognized.

8. **C. puberulus**, n. sp.

Black, clothed with coarse pale gray pubescence. Beak coarsely punctured, rather stout, not dilated at tip, sides parallel, upper surface not very convex, scarcely carinate, front feebly concave transversely. Prothorax not longer than wide at base, gradually narrowed in front, feebly constricted at the tip, base broadly bisinuate, middle lobe broadly rounded, disc with a few large scattered punctures, black, with the sides and two broad converging vittæ, which almost meet at the tip, gray; basal excavation very large and deep, extending beyond the middle. Elytra wider than the prothorax, broadly impressed around the scutellum, and flattened towards the humeri, which are rounded, sides parallel, then obliquely narrowed, tips obtusely rounded, sub-acuminate; striæ composed of large close set punctures, interspaces slightly convex, first, second, and seventh darker, and mottled with a few small spots. Beneath with large scattered black punctures; hind tarsi with first joint not longer than second, third joint slightly wider, bilobed, lobes spongy beneath. Length 8–9.5 mm.; .32–.375 inch.

Nevada; several specimens.

9. C. **carinicollis**, n. sp.

Black, pubescence short and dense, gray. Beak shorter than the prothorax, stout, a little thicker at the tip, coarsely punctured, not strongly carinate for more than half its length, carina terminating at each end in a puncture, with a broad groove each side extending from the tip about one-fourth the length. Prothorax longer than wide, narrowed in front, sides broadly rounded, base oblique, broadly angulated and rounded at the middle, densely punctulate, sparsely and irregularly coarsely punctured, basal excavation feeble, V-shaped, medial carina strong, extending from tip nearly to base. Elytra a little wider than the prothorax, broadly impressed around the scutellum and also near the humeri, which are oblique and less rounded than usual, sides straight, then obliquely narrowed, tip obtusely rounded, not acuminate; striæ composed of deep separate, but not very distant punctures, first and second, sixth, seventh, and eighth interspaces less mottled with pubescence than the others. Hind tarsi with the first joint longer and narrower than the second, third wider, broadly bilobed, all of them spongy beneath, with a narrow median groove. Length 13.5 mm.; .53 inch.

One specimen collected by me in Colorado. This species is of nearly the same form as *C. trivittatus*, but the elytra are more obliquely narrowed near the tip, and the other characters are very different. The hair seems to be abraded from the head and prothorax. The scutellum is narrow but more obvious in this than in the other species.

10. C. **vittatus** Kirby, Fauna Bor. Am. iv, 199.

Black, clothed with very fine short pruinose pubescence; beak stout, a little wider at tip, feebly carinate for more than half its length, with a broad frontal concavity, densely punctured above, sparsely and more coarsely at the sides. Prothorax longer than wide, sides nearly parallel, suddenly rounded and narrowed near the tip, base emarginate each side, middle lobe prominent, rounded, side angles acute; disc densely punctured and cribrate, basal excavation narrow, deep, medial carina distinct, extending from the tip to the excavation; sides and two dorsal vittæ which are broad at base and narrow in front, pubescent. Elytra with rows of deep, rather approximate punctures, interspaces flat, third and seventh less pubescent, and therefore darker; base flattened around the scutellum, and again near the humeri, which are rounded; sides parallel, then obliquely narrowed, tips obtusely rounded. Hind tarsi with the first joint a little longer, second and third spongy beneath, the latter broader and bilobed. Length 8 mm.; .32 inch.

One specimen from Oregon, and two from California.

11. C. **sparsus**, n. sp.

Black, pubescence less fine, yellowish-gray. Beak cylindrical, not very stout, not wider at tip, punctured, scarcely carinate, with a broad frontal impression. Prothorax a little longer than wide, very slightly narrowed in front except near the tip, where it is suddenly rounded and narrowed and slightly tuboulate, base strongly emarginate each side, middle lobe rounded, side angles acute; disc punctulate with a few very large scattered punctures; medial carina distinct, basal excavation narrow, deep; sides and broad dorsal vittæ becoming narrower in front, pubescent. Elytra as in the preceding; except that the striæ are composed of distant punctures; the second and sixth interspaces are less pubescent and darker. Hind tarsi as in *C. vittatus.* Length 6.5 mm.; .25 inch.

One specimen from Colorado, in the collection of Dr. Horn.

CLEONASPIS n. g.

C. lutulentus differs from *Cleonus* by the hind tarsi being narrow, with the first joint longer than the second, and the third evidently shorter, not wider, and emarginate, not bilobed, and not spongy beneath. The beak is cylindrical, rather stout, a little shorter than the prothorax, and not at all carinate. The prothorax is a little longer than wide, slightly and gradually narrowed in front, feebly constricted at the apex; the base is oblique and very feebly emarginate each side, with the middle lobe obtuse, scarcely prominent; the side angles are acute; the disc sparsely, coarsely punctured, obsoletely carinate, and the basal excavation is hardly perceptible. The elytra are transversely impressed at base, the humeri are not rounded, the sides are straight, and then almost regularly rounded to the tip; uniformly pubescent; the striæ are composed of large, rather approximate punctures. The scutellum is not depressed, triangular, longer than wide. The antennæ are more slender than in *Cleonus,* with the first joint of the funiculus longer than the second, which is equal to the third; joints 2–6 rather closely connected. The antennal grooves are not confluent below, or I should place this species in *Mecaspis.*

1. **C. lutulentus.** *Cleonus lut.* Lec. Col. Kans. 18.

Two specimens, New Mexico. The pubescence is of a uniform dirty brown, except that there is a slightly darker broad dorsal prothoracic stripe, becoming broader towards the base.

LIXUS Fabr.

The species of this genus are generally more slender than those of *Cleonus,* though not always. The tarsi are broad and spongy beneath, with the third joint deeply bilobed. The beak is cylindrical, not thickened at tip, usually slender, except in *L. pleuralis* and *texanus,* and not carinated, except in *L. pleuralis* and *sylvius.* The antennal grooves commence at some distance from the tip of the beak. The antennæ, except in *L. pleuralis* and *texanus* are slender, with the first joint of the funiculus thicker, and the second as long as the two following united; in those two the funiculus is less elongated, less slender, and the second joint is somewhat less elongated.

The species are numerous and difficult to distinguish; they are covered with a pollinose yellowish powder which is easily rubbed off, and in addition, some of them are pubescent. In several species the apices of the elytra are prolonged into an acute spine, and the beak of the ♂ is frequently shorter and stouter than in the ♀.

A. Beak rather stout, subcarinate.................. 2.
B. " " " not carinate............... 3.
C. " more slender, not carinate, except in *sylvius* 4.
2. Basal excavation of prothorax deep; surface above thinly clothed with gray pubescence; sides of prothorax, elytra and under surface densely white pubescent.............................. 1. pleuralis.
3. Basal excavation of prothorax broad, not deep, surface dull, finely pubescent.................. 2. texanus.
4. Antennæ moderately slender, first joint of funicle stouter than second......................... 5.
Antennæ longer, more slender, first and second joints of funicle equal, each as long as the four following united............................ 17.
5. Tips of elytra prolonged, pubescence pruinose... 6.
" " not prolonged.................... 9.
6. Body very elongated.......................... 7.
" less elongated; pubescence less fine, gray 8.
7. Pubescence gray, very fine..................... 3. rubellus.
" yellowish, denser..................... 4. auctus.
8. Tips of elytra long............................ 5. caudifer.
" " very short; prothorax asperate..... 6. asper.
9. Beak strongly, though not coarsely punctured.... 10.
" finely, densely punctulate.................. 12.
" sparsely punctulate or nearly smooth; antennæ inserted about the middle of the length; basal concavity of prothorax feeble............ 15.
10. Beak obsoletely carinate...................... 11.
" distinctly " .... 7. sylvius.
11. Prothorax with shallower punctures .... 8. punctinasus.
" " few deep " (smaller).... 9. parcus.
12. Antennæ inserted $\frac{1}{3}$–$\frac{1}{4}$ from the tip .... 13.
" " near the tip, prothorax not rounded on the sides......................... 10. terminalis.
13. Prothorax shorter, rounded and sub-sinuate on the sides.................................. 14.
Prothorax long, not rounded on the sides....... 11. rectus.
14. Body long, elytral impressions not deep......... 12. mucidus.
" " " " deep .... 13. concavus.
" shorter and stouter than usual........... 14. musculus.
15. Elytra conjointly rounded at tip................ 16.
" sub-acuminate at tip .... 15. perforatus.
16. Prothorax with sides rounded in front.......... 16. scrobicollis.

Prothorax with sides feebly rounded in front; disc channeled for two-thirds the length......	17. **placidus.**
Prothorax more strongly cribrate..............	18. **laesicollis.**
17. Antennæ inserted at the middle of the beak in ♀; about one-third from tip in ♂; large, slender, rather shining, thinly and finely pubescent......	19. **macer.**

1. L. **pleuralis** Lec., Pr. Ac. Nat. Sc. Phila. 1858, 78.

Arizona and Lower California.

The specimens from Cape San Lucas are more pubescent, and in some individuals the pubescence is a little mottled on the elytra. It is perhaps *L. modestus* Mann. Bull. Mosc. 1843, 291; *L. californicus* Motsch. Bull. Mosc. 1845, 378.

2. L. **texanus**, n. sp.

Black, thinly clothed with gray or yellowish-gray hair, denser towards the sides, head and beak sparsely coarsely punctured, the latter stout, shorter than the prothorax, feebly carinate for half the length; antennæ inserted near the tip, not slender, first and second joints of funiculus equal, each as long as the two following. Prothorax scarcely longer than wide, gradually narrowed in front, broadly rounded on the sides, not constricted at tip, covered with large, not very deep punctures, basal excavation feeble. Elytra wider behind the base than the prothorax, humeri rounded, sides parallel, conjointly rounded at tip, striæ composed of large not very distant punctures. Thighs slender, tarsi with the last joint as long as the others united. Length 8–10.3 mm.; .32–.40 inch.

Two specimens from Texas; Mr. A. Sallé.

3. L. **rubellus** Randall, Bost. Journ. Nat. Hist. ii, 41.

Brownish-black, thinly clothed with very short, fine gray pubescence; long, slender. Beak somewhat shorter than the prothorax, densely, finely punctured, with a few larger punctures intermixed; obsoletely carinate, with a large frontal puncture. Antennæ inserted near the tip of the beak. Prothorax longer than wide, gradually narrowed from base to tip, not constricted, sides nearly straight, base slightly oblique each side, medial angle very obtuse, not rounded; surface rugosely punctulate, with a few shallow punctures intermixed, excavation shallow, extending from base nearly to the tip. Elytra finely rugosely punctulate, with striæ composed of not very distant punctures, tips prolonged, divergent, not acute. Legs brown, thighs slender. Length 8 mm.; .32 inch.

One specimen, Wisconsin. Mr. Randall's specimen measured .45 inch from tip of beak, and was found in Massachusetts.

4. L. **auctus** Lec., Pac. R. R. Expl. and Surv. Insects, p. 57.

One ♀ specimen, Oregon. Larger than the preceding, with the beak more slender, and the antennæ inserted about one-fourth from the tip, (probably sexual characters); there is a well-marked frontal puncture, and another between the insertions of the antennæ. The form and sculpture are similar in the two species, but the pubescence is much more dense in this one.

5. L. **caudifer**, n. sp.

Rather stout, black, densely clothed with fine short gray pubescence. Beak slender, not as long as the prothorax, nearly smooth, finely pubescent at base, naked at the tip. Antennæ inserted about one-fourth from the tip; frontal fovea elongate. Prothorax a little wider than long at the base, gradually much narrowed in front and not constricted, sides slightly rounded, base feebly emarginate each side, middle angle prominent, acute; dorsal excavation large, triangular, channeled, surface densely punctulate, with scattered shallow punctures. Elytra a little wider behind the base; medial impression broad, not deep; striæ composed of rather large distant punctures, tips prolonged, not divergent, but parallel. Thighs slender. Length 9.7–14 mm.; .38–.55 inch.

♂. Beak less slender, uniformly pubescent, a little broader at tip, and slightly flattened.

♀. Beak a little narrower, smooth, and naked at tip.

Three specimens, Illinois; found also in British Columbia.

6. L. **asper**, n. sp.

Rather stout, black, without lustre, clothed with fine gray pubescence. Beak as long as the prothorax, slender, densely punctured, more finely towards the tip; antennæ inserted about one-third from the tip, frontal fovea distinct. Prothorax scarcely wider at base than long, gradually much narrowed in front, feebly constricted, sides slightly rounded, base feebly emarginate each side, middle angle broad and rounded; surface densely punctulate, with scattered large partly elevated punctures, dorsal excavation large, triangular, rather deep, impressed at the middle of the base. Elytra wider than the prothorax, impressions wide and tolerably deep, striæ composed of approximate punctures, tips separately acuminate, though scarcely prolonged. Legs as in the preceding species. Length 11.3 mm.; .45 inch.

Three ♀, and one ♂; Owen's Valley, Cal., Dr. Horn. Quite distinct by the rough, partly elevated punctuation of the prothorax. The beak in the ♂ is less slender, and the antennæ are one-fourth from the tip; in the ♀ the apical part is longer, so that they are inserted at one-third the length from the tip; it also appears very obsoletely carinate in the latter sex from the front to near the insertion of the antennæ.

7. L. **sylvius** Boh., Sch. Curc. vii, 430.

One ♂ Pennsylvania; coll. Horn. I refer to this species a single specimen, in which the body is black, shining, thinly clothed with fine cinereous pubescence, the beak rather stout, as long as the prothorax, strongly punctured, feebly but distinctly carinate from the frontal puncture to the insertion of the antennæ; the prothorax punctulate and coarsely punctured, with a small deep impression at the base; not longer than wide, narrowed in front, feebly rounded on the sides, medial basal angle obtuse, not rounded. Elytra a little wider than the prothorax, transversely impressed behind the base, striæ composed of distant punctures, interspaces scarcely punctulate, tips separated, rounded, sub-acuminate. Length 8.5 mm.; .35 inch.

8. L. **punctinasus**, n. sp.

Black, thinly clothed with fine gray pubescence. Beak rather stout, as long as the prothorax, with the head strongly but not coarsely punctured, with scarcely a trace of carina, frontal fovea distinct; antennæ inserted near the tip of the beak. Prothorax not longer than wide, gradually strongly narrowed in front, moderately rounded on the sides, base emarginate each side, medial angle obtuse not rounded, disc rugosely punctulate with many large shallow punctures, basal impression small, deep. Elytra a little wider than the prothorax, separately rounded at tip, basal impressions not deep, striæ composed of distant punctures. Legs as in the preceding species. Length 7.7 mm.; .30 inch.

One ♂ Ohio. Not very different from the preceding species, but to be regarded as distinct on account of the antennæ being nearer the tip of the beak, which is not carinate, and the tips of the elytra being separately rounded and not sub-acuminate.

9. L. **parcus**, n. sp.

Black, thinly clothed with coarser gray pubescence. Beak rather stout, not carinate, as long as the prothorax, strongly punctured, front transversely impressed, with a well-marked fovea. Antennæ inserted very near the tip of the beak. Prothorax wider than long, much narrowed in front, moderately rounded on the sides, base obliquely emarginate each side, medial angle obtuse, prominent, not rounded; surface punctulate, sparsely coarsely punctured, basal impression vague, deep at the middle of the base. Elytra wider than the prothorax, tips rounded, basal impressions moderately deep, striæ composed of large distant punctures. Legs as in the preceding species. Length 5.5 mm.; .22 inch.

One ♂ California, Dr. Horn. The smallest species I have seen, and easily known by the coarsely punctured beak.

10. L. **terminalis**, n. sp.

Elongate, black, cinereous pubescent, mottled with small spots of denser hair; beak not very slender, as long as the prothorax; finely and densely punctulate, sides coarsely punctured; antennæ inserted near the tip. Prothorax longer than wide, gradually narrowed from the base, sides straight, base broadly emarginate each side, medial angle small, pointed; surface finely punctured, with other somewhat larger punctures, dorsal impression extending nearly to the tip, channeled, deeper at the base. Elytra not wider than the prothorax, basal impressions not large, moderately deep, striæ composed of distant punctures, tips separately rounded. Thighs moderately clavate. Length 9–11 mm.; .35–.45 inch.

♂. More densely pubescent, not shining.

♀. Less pubescent, shining.

Middle and Western States, not rare. Easily known by the separately rounded elytral tips. There is no sexual difference in the position of the antennæ, but the beak is a little longer in ♀ than in ♂. The antennæ are inserted about one-fifth the length from the tip.

One ♂ from Georgia differs in having the punctures of the elytra less distant, and the tips of the elytra more broadly rounded. It is perhaps a distinct species.

11. L. **rectus**, n. sp.

Elongate, finely pubescent, frequently pollinose, beak longer than the prothorax, upper surface finely and densely punctured, punctulate beyond the middle, antennæ inserted about one-third from the tip. Prothorax longer than wide, narrowed from the base, sides nearly straight, base emarginate each side, medial angle prominent, obtuse, not rounded; surface with approximate shallow punctures, interspaces finely punctured, dorsal concavity long, triangular, deep towards the base. Elytra not wider than the prothorax, striæ composed of rather distant punctures, basal impressions deep, tips separately rounded. Length 10.5 mm.; .42 inch.

One ♀, New York. Allied to *L. concavus*, but narrower, with the prothorax longer, and not rounded on the sides. I associate with this species one ♂ from Georgia, in which the beak is more pubescent, the antennæ less distant from the tip (about a quarter of the length), and the tips of the elytra conjointly rounded. It may indicate a distinct species, but I am unwilling to separate it at present.

12. L. **mucidus**, n. sp.

Large, rather robust, black, densely clothed with fine gray pubescence; beak longer than prothorax, upper surface densely finely punctulate, obsoletely carinate behind the antennæ, which are inserted about one-quarter from the tip. Prothorax wider than long, rounded on the sides, scarcely constricted at tip, densely finely punctured, and with scattered, larger, tolerably deep punctures, base emarginate each side, medial angle prominent, not rounded; dorsal excavation oval, deep. Elytra a little wider than the prothorax, basal impressions wide not deep, striæ composed of moderately distant punctures, tip conjointly rounded. Length 14.5 mm.; .57 inch.

One pair, Illinois, in the ♂ the beak is more densely pubescent, and the antennæ are somewhat nearer the tip.

13. L. **concavus** Say, Curc. 14; ed. Lec. i, 275; Boh., Sch. Curc. iii, 57.

Atlantic district, not rare. The beak is finely punctulate on the upper surface, the antennæ are inserted in ♂ about one-fourth, in ♀ about one-third from the tip; the punctures are denser in the former. The prothorax is wider than long, rounded on the sides, distinctly constricted at tip. The dorsal excavation is large, triangular and deep. The basal impressions of the elytra are also deep, and the tips are conjointly rounded.

14. L. **musculus** Say, Curc. 14; ed. Lec. i, 276; *L. calandroides* Randall, Bost. Journ. Nat. Hist. ii, 42.

Canada to Texas; Colorado. Shorter and stouter than our other species, and variable in appearance, according as the pubescence is well preserved or abraded. There is also some variation in the number and depth of the large punctures of the prothorax. The antennæ in ♂ are about one-fourth from the tip of the beak; in ♀ about one-third. The prothorax is wider than long, strongly narrowed in front, rounded on the sides, feebly constricted at tip; the dorsal excavation is not deep except at the base.

15. L. **perforatus**, n. sp.

Elongate, black, thinly clothed with gray pubescence. Beak as long as the prothorax, finely punctured; head very coarsely punctured. Prothorax longer than wide, narrowed in front, feebly rounded on the sides, which are more thickly pubescent, very deeply and coarsely punctured, interspaces densely punctulate, basal excavation small. Elytra a little wider than the prothorax, scutellar impression wide not deep, intrahumeral impressions deep; striæ composed of subquadrate not distant punctures, tips separately acuminate, but not prolonged; the inner and outer interspaces more densely pubescent, but not very obviously so.

♂. Beak stouter, densely punctured, more coarsely on the sides, more finely towards the tip; antennæ one-third from the tip.

♀. Beak more slender, shining, sparsely and finely punctured, sides sparsely and less finely punctured. Antennæ inserted about the middle of the beak.

California, Fort Tejon. The elytral striæ are alternately a little nearer.

16. L. **scrobicollis** Boh., Sch. Curc. iii, 84; *L. lateralis*‖ Say, Curc. 14; ed. Lec. i, 276.

One ♀ specimen, Kentucky. A small species easily known by the sides of the prothorax nearly parallel, much rounded and constricted near the tip; the dorsal excavation is small and basal; the punctures very large and deep, though sparse. The sides of the prothorax and elytra are more densely pubescent; the tips of the elytra are rounded; the antennæ are inserted at the middle of the beak, which is sparsely punctulate, with a few punctures intermixed at the base and sides. Length 7 mm; .27 inch

17. L. **placidus**, n. sp.

Black, somewhat shining, thinly pubescent, sides of prothorax and sub marginal broad vitta of elytra whitish pubescent. Beak rather stout, as long as the prothorax, finely not densely punctured, with a few larger punctures towards the base and on the sides; antennæ inserted at the middle of the beak. Prothorax a little longer than wide, gradually narrowed from the base, feebly rounded on the sides, not constricted at tip, finely punctured, with scattered not remote, moderately large but not very deep punctures, disc channelled, with a small basal impression. Elytra a little wider than the prothorax, conjointly rounded at tip, basal impressions shallow; striæ composed of large rather distant punctures. Length 10 mm.; .40 inch.

Two ♀, Colorado. A very distinct species of moderately elongate form.

18. L. **læsicollis** Lec., Proc. Ac. Nat. Sc. Phila., 1858, 78.

Texas. Beak stout, finely punctured, base, sides and head coarsely punctured; prothorax very coarsely and tolerably densely cribrate, sides nearly parallel, rounded near the tip, basal impression small. Elytra with deep basal impressions; striæ composed of distant large punctures, tips conjointly subacute, scarcely rounded.

19. L. **macer**, n. sp.

Very elongate, black shining, thinly clothed with fine gray pubescence. Beak longer than prothorax, curved, not stout, punctured; head sparsely punctured. Prothorax scarcely longer than wide, strongly narrowed in front, feebly rounded on the sides, punctulate, with larger not deep punctures, middle of base deeply impressed, base emarginate each side, middle angle prominent, obtuse, rounded at tip. Elytra a little broader than the prothorax, basal impressions deep, striæ composed of rather approximate punctures; tips conjointly subacute, slightly rounded. Length 12–19.5 mm.; .48–.77 inch.

♂. Beak stouter, a little longer than the prothorax, antennæ inserted one-third from the tip.

♀. Beak nearly twice as long as the the prothorax, antennæ inserted about the middle.

Southern and Western States to Colorado and Texas; not rare. I cannot understand how this species has remained undescribed. It is easily known not only by the large size and elongate form, but by the slender antennæ; the first and second joints of the funiculus are equal, and very long. In some specimens there is a broad, sub-marginal pubescent vitta on the elytra, and in one individual this extends upon the sides of the prothorax.

SPECIES NOT IDENTIFIED.

L. **marginatus** Say, Curc. 13; ed. Lec. i, 275; Boh., Sch. Curc. iii, 70.

L. **præpotens** Boh., Sch. Curc. iii, 62; *Rhynchophorus præpotens* Say, Curc. 21; ed. Lec. i, 287.

L. **poricollis** Mann., Bull. Mosc. 1843, ii, 291.

L. **modestus** Mann., Bull. Mosc. ibid; *L. californicus* Motsch., ibid. 1843, ii, 378. Perhaps *L. pleuralis* Lec. (p. 155).

Tribe V. ERIRHININI.

This tribe consists of a great number of species, all of small size, and representing a large number of genera. Most of them are found near water, on plants, and some of them are quite aquatic in their habits. In the beak, prosternum, tibiæ and tarsi they differ greatly, so as to permit the recognition of several groups, as will be seen below, but they agree in the following characters:

Mandibles with three teeth, separated by two emarginations, the middle tooth more prominent; in the group *Desmorhines* the outer side of the mandibles, by the transposition of the inferior tooth, becomes toothed as in *Rhynchitidæ*; gular peduncle longer than wide, slightly emarginate, mentum small, not transverse, ligula and palpi prominent, smaller than in *Hylobiini*. The beak is cylindrical, sometimes very long and slender, sometimes rather stout; the antennal grooves commence at a distance from the tip, descend obliquely, and sometimes become confluent behind. The antennæ are geniculate, the scape long and slender; funiculus usually 7-jointed, sometimes (*Endalus*) 6-jointed; club oval, annulated, entirely clothed with sensitive surface except in *Lissorhoptus*. Prothorax with or without postocular lobes; front coxæ contiguous, prosternum flat, emarginate, or not, in front, sometimes (*Bagous*) broadly sulcate for reception of the beak. Mesosternum with the side pieces diagonally divided, epimera not attaining widely the base of the prothorax. Metasternum usually long, rarely (*Phycocœtes*) very short; side pieces narrow, dilated in front. Hind coxæ widely separated, transverse, narrower externally, and extending almost to the elytral margin. Legs never very stout, thighs usually simple, rarely (*Dorytomus*) toothed; tibiæ truncate at tip and feebly mucronate in most genera, strongly unguiculate in *Bagoi*. Tarsi usually dilated, narrow in certain genera; last joint sometimes long, sometimes short; claws not toothed, divergent, sometimes connate (*Desmorhines*), or single (*Brachybamus*); last joint wanting in the European genus *Anoplus*.

Ventral segments unequal, third and fourth united about equal to the second or fifth; sutures straight, excepting the first which is sinuate in most genera, and the last, which is broadly curved in *Stenopelmus*.

Our genera are numerous, and indicate several groups; in fact, all of those recognized by Lacordaire are represented, and I have found it necessary to establish two others.

The affinities of the tribe are in several directions: towards the *Hylobiini*, *Emphyastini* (*Phycocœtes*), *Ceutorhynchini* (*Hydronomi*).

Mesosternum as long as first ventral segment,	2.
" very short	viii. PHYCOCŒTES.
2. Tibiæ truncate at tip, feebly mucronate	3.
" not truncate, strongly unguiculate	vii. HYDRONOMI.
3. Eyes contiguous to prothorax	4.
" distant from "	iii. EUGNOMI.
4. Body scaly or pubescent	5.
" covered with a waterproof crust	6.
5. Beak not constricted at base; claws divergent	i. ERIRHINI.
Beak strongly constricted at base: claws connate or approximate	ii. DESMORHINES.
6. Tarsi with third joint bilobed	7.
" " " " simple; beak short and stout	iv. STENOPELMI.
7. Last joint of tarsi short	v. CRYPTOPLI.
" " " " long	vi. BRACHYPI.

Group I. **Erirhini.**

The species have the beak long, usually slender, the mandibles with two sharp teeth at the end; the inferior cusp in *Erycus* comes to the outer margin, and is not very prominent, but thus shows a tendency to assume the position which it has in the next group. The antennal grooves are directed against the eyes, and do not converge beneath. The scape nearly or quite attains the eyes, and the first, and usually the second joint of the funicle are longer than the others. The mesosternum is as long as the first ventral; the legs are slender, tibiæ truncate at tip, and feebly mucronate; the tarsi are spongy beneath, with the third joint dilated and bilobed; last joint long, claws rather strong, simple, divergent.

This group recedes in the direction of the *Phytonomini* and *Hylobiini.**

Thighs not toothed, prosternum emarginate..........	2.
" toothed, prosternum not "	DORYTOMUS.
2. Body pubescent or glabrous......................	3.
" densely clothed with scales..................	GRYPIDIUS.
3. Antennæ inserted far from the tip of the beak.....	ERYCUS.
" " near " " "	PROCAS.

PROCAS Stephens.

This genus bears a strong resemblance to *Erycus*, but differs in having the beak rather less slender, and the antennæ inserted very near the tip; the second joint of the funicle is shorter than the first, though longer than the third. The prosternum is strongly emarginate in front, and the postocular lobes are broad. The thighs are unarmed, the tibiæ straight, strongly pubescent, truncate at tip, and scarcely mucronate; the hind pair have two small terminal spines or spurs, as mentioned by Tournier.†

1. **P. picipes** Stephens, Ill. British Ent. iv, 90; Boh., Sch. Curc. vi, 387. *Erirhinus Steveni* Gyll., Sch. Curc. iii, 287: *Procas Steveni* Sch. Curc. vi, 387.

Lake Superior; Ulke. My specimen agrees so closely with the description and figure (DuVal, Gen. Col. Eur. iv. pl. 13, f. 58), that I do not venture to separate it. Opaque, black, slightly mottled with spots of very fine pubescence; head and beak very densely punctured. Prothorax a little wider than long, rather small, rounded on the sides, narrower in front, and very slightly constricted; very densely punctured. Elytra one-third wider than the prothorax, oblong, humeri rounded, striæ deep, catenate with distant punctures; interspaces wide, flat, finely and densely rugose and subgranulate. Beneath densely punctured, less opaque. Length, 5.3 mm; .21 inch.

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* The following species do not belong to this tribe: *Erirhinus ephippiatus* Say, has the thighs not toothed, and the claws broadly appendiculate; it indicates a new genus *Alyca* of *Anthonomini*. *Erirhinus juniperinus* Sanborn, is an *Anthonomus*. *Erirhinus lutulentus* and *rutilus* Boh., Sch. Curc. vii, 2d, 165 and 167 not identified.

† Annales Soc. Entom. Belgique, xvii.

GRYPIDIUS Sch.

1. **G. equiseti** Gyll., Sch. Curc. iii, 314; *Curculio eq.* Fabr., Ent. Syst. i, 403; *Rhynchænus eq.* Fabr., Syst. El. ii, 443, &c. &c.

A common European species which is is indigenous in Canada, Kansas, and on the north shore of Lake Superior. A Canadian specimen was sent me by Mr. W. Couper, which I determined simply as *Grypidius*, n. sp.?, but by some confusion of labels, in describing the species to which I had given no definite names, he has given the name *G. vittatus** to a small species of *Sitones*, apparently the *S. tibialis* of Europe, which occurs in Canada and in Hudson Bay Territory, perhaps imported, perhaps indigenous.

2. **G. brunnirostris** Gyll., Sch. Curc. iii, 316; *Rhynchænus br.* Fabr., Syst. El. ii, 445, &c.

Two specimens from Oregon do not appear sufficiently distinct from this European species. It is smaller than the preceding, and easily known by the elytral interspaces being even, not tuberculate, and the scales uniform in color.

ERYCUS Tournier, Ann. Ent. Belg. xvii.

This genus contains those species of *Erirhinus* in which the prosternum is deeply emarginate in front, and the postocular lobes broad and distinct. The hind tibiæ are feebly mucronate, and have in addition two very small spines or spurs.

But two species are known to me, the first of which differs but slightly from the European *E. æthiops*.

Nearly glabrous, shining; prothorax sparsely punctured.. 1. **morio.**
Mottled with pubescence; prothorax coarsely, densely punctured.. 2. **puncticollis.**

1. **E. morio** Mann., Bull. Mosc. 1853, ii, 240 (*Erirhinus.*)

Alaska, Vancouver Island, Great Slave Lake, Canada.

2. **E. puncticollis** n. sp.

Black, mottled with yellowish pubescence. Head and beak strongly not densely punctured; prothorax as long as wide, sides feebly rounded, more strongly in front, tip slightly impressed on the sides, surface coarsely and densely punctured. Elytra wider than prothorax, humeri rounded, striæ with quadrate approximate punctures, interspaces densely punctured, irregularly pubescent, with a more conspicuous sutural transverse spot behind the middle. Thighs somewhat clavate, not toothed; front and middle tibiæ moderately strongly mucronate, hind pair with a very small mucro, and small terminal spurs. Body beneath coarsely and densely punctured. Length 5.5–6 mm; .22–.25 inch.

Middle and Western States and Lake Superior. Looks like a small *Pissodes*.

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* Canadian Naturalist 1865, p. 63; *v. ante*, p. 115.

DORYTOMUS Sch.

In this genus the prosternum is not emarginate in front, and the thighs are armed beneath with a distinct tooth; in the first three species this tooth is small and acute, in the others broader and nearly rectangular. The prothorax is narrower than the elytra, suddenly narrowed, and sometimes constricted in front, without postocular lobes. The body is mottled with spots of pubescence, which in *D. squamosus* is very short and scale-like. The species occur mostly on willows.

	Thighs more slender, tooth small, acute; beak very long, striate; antennæ more slender, second joint of funicle longer than third..........	2.
	Thighs stouter, tooth broader and larger..........	3.
2.	Prothorax finely punctured, not constricted at tip..	**1. mucidus.**
	Prothorax strongly punctured, suddenly constricted at tip............................	**2. laticollis.**
	Prothorax densely punctured, gradually rounded and feebly constricted at tip..............	**3. rufulus.**
3.	Beak striate................................	4.
	" punctured, scarcely striate..............	7.
4.	Prothorax not wider than long................	5.
	" distinctly transverse, coarsely and densely punctured, suddenly narrowed at tip and constricted........................	**4. brevicollis.**
5.	Prothorax not constricted at tip..............	6.
	" constricted " "	**5. luridus.**
6.	" suddenly narrowed in front........	**6. subsignatus.**
	" gradually rounded near the tip......	**7. longulus.**
7.	Pubescence squamiform, slightly mottled, prothorax gradually rounded near the tip, not constricted..............................	**8. squamosus.**
	Pubescence coarse, hairy, nearly uniform......	8.
8.	Fulvous, with yellow pubescence.............	**9. Mannerheimii.**
	Piceous with gray pubescence................	9.
9.	Pubescence of elytra mixed with longer hairs..	**10. hirtus.**
	" " " " erect stiff hairs	**11. hispidus.**

1. **D. mucidus.** *Erirhinus muc.* Say, Curc. 14; ed. Lec. i, 277; Gyll., Sch. Curc. iii, 291.

Canada and Kansas, abundant at Los Angeles and Oakgrove, Cal.; G. R. Crotch. Larger than our other species, and easily recognized by the more finely punctured prothorax, and very long beak. Breeds in blossoms of cottonwood; develops very rapidly, (Riley).

2. **D. laticollis** n. sp.

Pitchy black, irregularly mottled with cinereous pubescence. Beak very long, slender, striate and coarsely punctured, strongly curved. Prothorax wider than long, rather coarsely punctured, without dorsal line, sides rounded, suddenly narrowed near the tip, and strongly constricted. Elytra very little wider than the prothorax; striæ composed of close-set punctures, disc convex, obliquely impressed near the base, interspaces flat, finely punctulate. Thighs rather slender, armed with a small acute tooth. Length 4.5 mm; .175 inch.

Lake Superior and Iowa.

3. D. **rufulus.** *Erirhinus ruf.* Mann., Bull. Mosc. 1853, ii, 240.

Alaska: one specimen kindly sent by Baron Chaudoir. Smaller than the preceding, and very closely allied to it, differing chiefly by the sides of the prothorax less rounded, less suddenly narrowed and less deeply constricted at tip, and by the elytra one-third wider than the prothorax. The color is ferruginous, though this may not be of specific value. The beak is scarcely as long and slender, but the legs are similar. Mannerheim erroneously states that the thighs are unarmed.

4. D. **brevicollis,** n. sp.

Pitchy black, irregularly mottled with cinereous hair, antennæ and legs brown. Beak as long as the head and prothorax, strongly striate and coarsely punctured. Prothorax one-half wider than long, densely punctured, sides rounded, tip constricted; elytra one-third wider than the prothorax, convex; striæ closely punctured, interspaces sparsely punctulate. Thighs stout, with a rather large tooth. Length 3.5–4.3 mm; .14–.17 inch.

Western and Middle States and Lake Superior. Differs from the following species chiefly by the more transverse prothorax.

5. D. **luridus.** *Erirhinus lur.* Mann., Bull, Mos. 1853, ii, 241.

Alaska and California. I have a specimen in bad condition, from Georgia, which may possibly belong to this species, if not, it will indicate a new one closely allied. In well preserved specimens the pubescence is very coarse and mottled in color. The posterior callus of the elytra is somewhat distinct, but by no means sufficiently so to warrant Mannerheim's expression, "*elytris ante apicem utrinque tuberculo instructis.*"

Two smaller specimens from Alaska have the thorax less rounded on the sides near the tip, and in one of them there is a distinct smooth, narrow, dorsal vitta; they were sent to me as *Erirhinus vestitus* Mann., a very different species, which has the beak punctured but not striate.

Four specimens of small size were collected by Mr. Crotch in the Mojave Desert, Cal., which I would temporarily refer to this species. They are yellow brown with a broad darker stripe on each elytron. They agree in form with the Eastern specimen, and are a little more robust than those from Alaska. Length 2.5 mm; .10 inch.

A larger series of well-preserved specimens will perhaps show the propriety of receiving these three forms as distinct species.

6. D. **subsignatus.** *Erirhinus subs.* Mann., Bull. Mosc. 1853, ii, 241.

Alaska, Count Mnizech and Prof. Mäklin.

7. **D. longulus**, n. sp.

Ferruginous (immature?), mottled with cinereous pubescence. Beak as long as the head and prothorax, nearly straight, not very slender, deeply striate and punctured. Prothorax not wider than long, gradually narrowed and rounded on the sides in front, and not constricted; densely though not coarsely punctured, with a slight trace of a smooth dorsal line. Elytra elongate, one-quarter wider than the thorax, convex, transversely impressed near the base, striæ closely punctured, margin impressed just behind the humerus. Thighs stout, with a broad tooth. Length 3.5 mm; .14 inch.

One specimen from Alaska sent with *D. rufulus*, from which it is abundantly distinct by the longer form, different prothorax, stouter and more strongly toothed thighs. The transverse impression of the elytra near the base is rather stronger than in *D. luridus*, and very much as in *D. subsignatus*, with which it agrees except in the form of the prothorax.

8. **D. squamosus**. *Anthonomus* ‡ *tessellatus* ‖ Walsh, Proc. Ent. Soc. Phila. vi, 267.

Piceous, or ferruginous, mottled with pale depressed scale-like hairs. Beak as long as the head and prothorax, not striate, punctured, nearly smooth at tip. Prothorax a little wider than long, densely punctured, sides rounded in front, and slightly constricted. Elytra one-third wider than the prothorax, convex, striæ rather coarsely punctured. Thighs rather slender, tooth small.

Illinois and Kansas: bred by Mr. B. D. Walsh from galls which occur on willow. Mr. Walsh recognized the resemblance in form to *Erirhinus*, but unfortunately misplaced this species, in which the claws are simple and divergent.

9. **D. Mannerheimii**. *Erirhinus Mann.* Gemminger, Col. Hefte, viii, 122; *Erirhinus vestitus* ‖ Mann., Bull. Mosc. 1853, ii, 242.

Alaska, one specimen, Prof. Mäklin; British Columbia. Quite distinct from the other species in our fauna by the uniform coarse gray pubescence, and the punctured beak; the prothorax is a little wider than long, suddenly narrowed, rounded and feebly constricted near the tip. Length 2.5 mm: .10 inch.

10. **D. hirtus**, n. sp.

Brownish yellow, or fulvous, clothed with coarse yellow hair, which is mixed with longer hairs on the elytra. Beak as long as the head and prothorax, finely punctured, feebly striate near the base, marked between the antennæ with an elongate fovea. Prothorax transverse, one-half wider than long, rounded on the sides, suddenly narrowed, rounded and constricted near the tip; disc strongly not very densely punctured, obsoletely channeled. Elytra wider than the prothorax, oblong elongate, humeri rounded; striæ composed of approximate square punctures, interspaces flat, sparsely punctulate and rugose. Thighs armed with a small tooth. Length 3.5 mm; .14 inch.

One specimen, San Diego, Cal.

11. **D. hispidus**, n. sp.

Brownish yellow, clothed with coarse yellow hair, slightly mottled near the tips of the elytra, and mixed on the elytra with longer stiff suberect bristles. Beak as long as the head and prothorax, finely punctured, without striæ and without interantennal fovea. Prothorax strongly punctured, with an indistinct smooth dorsal line; one-half wider than long, rounded on the sides; suddenly rounded, narrowed, and very feebly constricted near the tip. Elytra oblong elongate, wider than the prothorax, humeri rounded, striæ composed of approximate punctures, interspaces wide, flat, sparsely punctulate. Thighs armed with a small tooth. Length 3.5 mm; .14 inch.

One specimen, New Mexico. Very similar to the preceding, but sufficiently distinct by the suberect bristles of the elytra, the prothorax less constricted at the tip, and the beak without a fovea between the antennæ.

Group II. **Desmorhines.**

In the genera constituting this group the beak is slender, and separated from the head by a sharply defined transverse line, or constriction. In our genera the claws are connate at base, but as this character is not mentioned in the European genus *Sharpia* (Tournier, Ann. Ent. Belg. xvii,) and is somewhat variable in *Smicronyx*, I do not know that it is properly of group value. The mandibles are truncate at tip, and toothed both on the inner and outer edge as in *Rhynchitidæ*. The prosternum is emarginate in front, and the ventral sutures are very slightly curved at the sides. The antennal grooves descend obliquely and are almost confluent behind.

Antennæ with first and second joints of funicle elongated.. 2.
Antennæ with second joint of funicle scarcely longer than third .... 3.
2. Antennæ slender, club small, oval..................... DESMORIS.
" stouter, club larger, elongate oval......PACHYTYCHIUS.
3. Claws small, frequently connate nearly to the tip SMICRONYX.

DESMORIS n. g.

This genus corresponds closely with *Erirhinus*, except in the differences indicated in the definition of the group, viz., the connate claws, the oblique antennal grooves which are nearly confluent behind, and the beak constricted at base. The second joint of the funicle is as long as the first, but more slender. The thighs are clavate, unarmed. The tibiæ slightly mucronate and truncate at tip, nearly as long as the thighs; tarsi dilated, third joint deeply bilobed, fourth joint long; claws small, connate nearly to the tip.

The appearance is that of *Balaninus* in miniature, the eyes are rather large and transverse, the sides of the prothorax scarcely lobed, and the prosternum moderately emarginate in front; the prothorax is rounded on the sides, narrowed in front, feebly constricted near the tip; the elytra wider than the prothorax, striæ deep, slightly punctured, interspaces flat. The beak is one-half longer than the head and prothorax, and is separated from the head by a deep transverse impression.

Scape of antennæ not attaining the eyes........................ 1. **scapalis.**
" " nearly " " .... 2. **constrictus.**

1. **D. scapalis**, n. sp.

Dark-brown, densely clothed with whitish scales. Beak strongly punctured, antennæ slender, with the scape not reaching the eyes, inserted about the middle of the beak. Head sparsely punctured, separated from the beak by a sharp transverse impression. Prothorax densely punctured, very convex, not longer than wide, much rounded on the sides, narrowed in front, and constricted at the sides at a greater distance from the tip than usual, base nearly straight. Elytra one-half wider than the prothorax, convex, feebly emarginate at base, humeri prominent, rounded; striæ deep, strongly punctured, interspaces flat, sparsely rugosely punctured. Thighs strongly clavate. Length 4.5 mm.; .17 inch.

One specimen, Kansas. Larger than the next, and easily known by the short antennal scape, which fails to reach the eyes by a length equal to the first joint of the funicle.

2. **D. constrictus.** *Rhynchænus constr.* Say, Journ. Ac. Nat. Sc. Phila. iii, 313; ed. Lec. ii, 176; *Balaninus constr.* Say, Curc. 26; ed. Lec. i, 294; Sch. Curc. vii, 293; *Erirhinus constr.* Gyll., Sch. Curc. iii, 286.

Kansas and Missouri, not rare. The beak is not quite so long in ♂ as in ♀; it is punctured in the former, and squamose behind the antennæ; in the latter it is glabrous, except at the base, and smooth except on the sides near the base. Smaller than the preceding, with the sides of the thorax less rounded; the color is blackish, with the antennæ and legs dark ferruginous. Either of these species will agree with the descriptions of Say and Gyllenhal. The latter author does not mention the transverse constriction at the base of the beak.

PACHYTYCHIUS Jekel.

The species which I have referred to this genus are rather convex and stout insects, having the sides of the prothorax and elytra rounded. They agree with *Desmoris* in having the second joint of the funicle elongated, but the antennæ are stouter, and the club larger. They differ from *Smicronyx* chiefly by the second joint of the funicle being obviously longer than the third. The claws are connate for one-half their length.

Elytra mottled with spots of gray scales.................... 1. **amœnus.**
" with broad white margin.............................. 2. **discoideus.**

1. **P. amœnus.** *Tychius amœnus* Say, Curc. 26; ed. Lec. i, 294; Gyll., Sch. Curc. iii, 419.

Western States, and Lake Superior. A very robust species, clothed with dark-brown scales; the prothorax has four whitish vittæ; the elytra a short basal line on each, and some narrow irregular whitish bands; the sides of the prothorax are much rounded and incurved at the base. The scales at the base of the beak form two little tufts as in the next species.

2. P. **discoideus**, n. sp.

Robust, black, clothed with white scales; disc of prothorax and elytra brown. Beak longer than head and thorax, not slender, curved, strongly punctured, not thickened towards the base, which is deeply transversely impressed; the scales form two small tufts near the transverse impression. Prothorax wider than long, very much narrowed in front, strongly rounded on the sides, which are incurved near the base, though less so than in *P. amœnus*, coarsely and densely punctured; disc brown for two-thirds the length, and one-half the width; with a whitish basal vitta. Elytra wider than prothorax, rounded on the sides, though less so than in the preceding; humeri rounded, but somewhat prominent; striæ fine, interspaces flat. Thighs clavate, claws connate for about one-half the length. Length 2.5 mm.; .10 inch.

New York, Illinois, Texas, and California. The discoidal spot of the elytra extends from the base for half the length and breadth; there is frequently a black lateral spot on the elytra, just behind the middle.

SMICRONYX Sch.

This genus contains small species which only differ from *Pachytychius* by the second joint of the funicle being shorter than the first, and frequently not longer than the third; the scape reaches to the eyes. The postocular lobes of the prothorax are sometimes distinct, and the prosternum is moderately emarginate in front. The beak is shorter than in *Desmoris*, and is slightly thicker at base; the transverse constriction is well defined, and the pubescence at the base of the beak rises into two tufts.

The form varies somewhat, the first species resembles *Pachytychius* by the strongly rounded sides of prothorax and ovate elytra; others resemble in miniature *Dorytomus*, but the thighs are not toothed, and the claws are small and connate almost to the tips. Others again have the claws approximate, but scarcely connate.

The genus, even as thus defined, seems to me somewhat heterogeneous, and with more careful study will be found perhaps, to contain elements representing other European genera. It will be for future investigators to determine if our species shall be partitioned, or the European forms condensed.

The species are difficult to define, and the table given is not very satisfactory.

Second joint of funicle of antennæ not longer than third; claws connate for more than half the length....................................	2.
Second joint of funicle of antennæ longer than third; claws not connate, or feebly so........................	7.

2. Elytra ovate, rounded on the sides.............	3.
" oblong, parallel " "	4.
3. Prothorax transverse, scales yellow............	1. **corpulentus.**
" scarcely wider than long, scales gray	2. **ovipennis.**
4. Beak straight, scales gray.....................	5.
" curved...................................	6.
5. Elytra suddenly wider than prothorax..........	3. **griseus.**
" gradually, slightly wider than prothorax	4. **obtectus.**
6. Of usual size, scales yellow, elytra rather broad..	5. **flavicans.**
Very small, scales grayish, elytra narrow.......	6. **pusio.**
Of usual size, mottled with spots of gray scales..	7. **tychioides.**
7. Interspaces of elytra not setose................	9.
" " with single rows of hairs..	8.
8. Of usual size and form.........................	8. **vestitus.**
Smaller and more elongate.....................	9. **seriatus.**
9. Scales mottled in color........................	10.
" small, uniform bright fulvous...........	10. **fulvus.**
" large, dirty gray........................	11. **sordidus.**
10. Elytra longer and less convex.................	12. **cinereus.**
" more convex, scales large, oval.........	13. **squamulatus.**
" " " " narrow............	14. **corniculatus.**

1. **S. corpulentus**, n. sp.

Robust, black, densely clothed with oval ochreous scales; beak densely punctured, slightly curved, as long as the head and prothorax, thinly pubescent. Prothorax nearly twice as wide as long, convex, sides strongly rounded, densely punctured, punctures obscured by the scales, disc darker than the sides. Elytra convex, sub-ovate, one fourth wider than the prothorax, humeri prominent, rounded, striæ well impressed, fine, interspaces flat; disc with a common dark spot extending from the base nearly to the middle, wider behind, and reaching the third stria. Antennæ with the funicle rather stout, second joint not longer than the third; hind tibiæ scarcely mucronate. Length 2.7 mm; .11 inch.

One specimen, Louisiana. Resembles in form *Pachytychius discoideus*, but easily distinguished by the generic characters, and the different color of the scales.

2. **S. ovipennis**, n. sp.

Robust, piceous black, thinly clothed with large gray scales; beak punctured, thinly pubescent, slightly curved, as long as the head and prothorax, Prothorax scarcely wider than long, rounded on the sides, narrower in front, convex, densely punctured. Elytra ovate, nearly one-half wider than the prothorax, humeri rounded, striæ deep, sparsely punctured, interspaces flat. Antennæ with the funicle rather stout, second joint not longer than third; hind tibiæ scarcely mucronate. Length 2.5 mm.; .10 inch.

Michigan, Kansas, Texas. The color of the scales is sometimes uniform, sometimes mottled ; it is easily recognized by the ovate elytra, which are distinctly wider at the middle than at the base.

3. **S. griseus**, n. sp.

Black, not very densely clothed with oval gray scales; beak longer than head and prothorax, less curved than usual; squamose towards the base. Prothorax without postocular lobes, slightly longer than wide, gradually narrowed from the base, feebly rounded on the sides, moderately constricted at the sides near the tip ; not very convex, finely punctured. Elytra elongate, one-third wider than the prothorax, humeri not very prominent, broadly rounded: striæ impressed, punctured, not concealed by the scales. Antennæ and legs very dark-brown. Length 2 mm.; .08 inch.

Southern and Western States, Georgia to Kansas. This is probably *Micronyx cinereus* ‡ Dej., a name since used for another species.

4. **S. obtectus**, n. sp.

Black, very densely clothed with broadly oval yellowish scales, concealing the punctures; beak as long as the head and prothorax, curved ; prothorax a little longer than wide, gradually narrowed in front, and constricted as in *griseus*, but more rounded on the sides, strongly, not densely punctured. Elytra of the same form as in *griseus*, striæ concealed by the scales, but when they are removed, deep and punctured, interspaces flat, nearly smooth. Legs and antennæ very dark-brown. Length 2 mm.; .08 inch.

California, found by me at San Diego.

5. **S. flavicans**, n. sp.

Piceous, clothed with small ochreous scales ; beak slightly curved, as long as the head and prothorax, punctured, opaque, thinly pubescent. Prothorax a little wider than long, rounded on the sides, narrower in front, convex, densely punctured, postocular lobes broad, distinct. Elytra oblong, convex, sides parallel, then rounded at the tip ; one-third wider than the prothorax, humeri prominent, rounded; striæ well impressed, interspaces slightly convex. Antennæ with second joint of funicle not longer than third, legs brown, hind tibia scarcely mucronate. Length 2.7 mm.; .11 inch.

Texas. Belfrage ; one specimen.

6. **S. pusio**, n. sp.

Quite similar to *S. obtectus*, but very much smaller, with the scales broadly oval and very dense. The striæ of the elytra seem to be finer and somewhat nearer by pairs, the second and fourth interspaces appearing wider. Antennæ and legs dark-brown. Length 1.5 mm.; .06 inch.

Cape San Lucas ; Mr. Xantus.

7. **S. tychoides**, n. sp.

More robust and convex, black, irregularly mottled with small whitish scales, which are of two forms, some being broad and some quite narrow. Beak curved, longer than head and thorax, punctured and scaly towards the base. Prothorax a little wider than long, much rounded on the sides, narrowed in front, and not constricted, moderately punctured, punctures becoming granules at the sides. Elytra one-third wider than the prothorax, humeri rather prominent, less rounded, sides slightly rounded ; scales thinly distributed with small spots more densely placed, striæ well marked, punctured, interspaces flat. Legs and antennæ dark reddish-brown. Length nearly 3 mm.; .11 inch.

Western States; Kansas, Texas. The elytra are sometimes reddish-brown, with the suture dark.

8. S. **vestitus**, n. sp.

Rather robust, convex, black, very densely clothed with grayish and yellowish, broadly oval scales, though scarcely mottled in color. Beak as in the preceding. Prothorax as wide as long, narrowed from the base forwards, rounded on the sides, not constricted near the tip; densely and strongly punctured, with a few scattered hairs mingled with the scales, which conceal the punctures, except where abraided. Elytra suddenly more than one-third wider than the prothorax; humeri rather prominent, sides slightly rounded, disc convex with well-marked finely punctured striæ, interspaces flat, each with a row of whitish hairs. Antennæ and legs ferruginous brown. Length 2.75 mm.; .10 inch.

One specimen, Kansas.

9. S. **seriatus**, n. sp.

More elongate, clothed with oval dirt-colored scales, not mottled. Beak as usual. Prothorax as long as wide, very little narrowed in front, broadly rounded on the sides, scales intermixed with white hairs, disc (when denuded) coarsely punctured. Elytra elongate, about one-third wider than the prothorax, sides not rounded, striæ deep, punctured, interspaces flat, each with a row of longish white hairs. Length 1.7 mm.; .07 inch.

Mariposa, California; Dr. A. Thevenet. When the scales are rubbed off the hairs remain giving the appearance of very sparse pubescence; an excellent instance of the necessity of indicating the specific differences in *Rhynchophora* from form and sculpture, rather than color and vestiture. I have a partially rubbed specimen from New York, which only differs by the scales being more white.

10. S. **fulvus**, n. sp.

Black, densely clothed with rather small bright fulvous scales. Beak longer than head and prothorax, nearly straight, smooth, and shining, slightly punctulate at base. Prothorax about as long as wide, broadly rounded on the sides, somewhat narrowed in front, and feebly constricted, post-ocular lobes scarcely distinct; finely and densely punctured. Elytra oblong, one-third wider than the prothorax, convex, striæ fine, punctured, interspaces nearly flat. Antennæ piceous, second joint of funicle a little longer than third. Legs reddish-yellow, hind tibiæ not mucronate, claws approximate, not connate. Length 2.5 mm.; .10 inch.

One specimen, Missouri; C. V. Riley. This species differs from the others by the straight and nearly smooth beak. The ventral sutures are slightly yet distinctly curved. The form of body and the color of the scales gives a resemblance to *Sibynes*, from which it is abundantly distinguished by the simple claws.

11. **S. sordidus**, n. sp.

Black, elongate, densely clothed with rather small dirty gray scales. Beak as long as the head and prothorax, nearly straight, punctured, tip smooth and shining. Prothorax longer than wide, narrower in front, slightly rounded on the sides, postocular lobes wanting. Elytra oblong, humeri rounded, prominent, striæ fine, interspaces flat. Antennæ with the funicle rather slender, second joint longer than third. Claws rather large, approximate, not connate. Length 2 mm.; .08 inch.

Texas. Exactly resembles in appearance *S. griseus*, but differs by the larger claws, and more slender antennæ.

12. **S. cinereus** Motsch., Bull. Mosc., 1845, ii, 376.

California and Vancouver Island; G. R. Crotch; Dr. Thevenet. Easily known by its larger size (2.5 mm.; .10 inch), prothorax with rounded sides, and mottled color; a few short hairs are mingled with the scales, which are broad oval. The prothorax is thickly punctured, and distinctly constricted near the tip. The elytra are comparatively longer and less convex than in the neighboring species, thus producing a resemblance to *Dorytomus*.

13. **S. squamulatus**, n. sp.

Black, densely clothed with rather large oval gray scales, mottled with brown upon the elytra. Beak brown, longer than head and prothorax, slender, nearly straight, shining at tip, punctured and pubescent at the base. Prothorax as long as wide, rounded on the sides, narrower in front, postocular lobes not distinct. Elytra oblong, one-third wider than the prothorax, humeri rounded, prominent, striæ fine. Antennæ brown, with second joint of funicle scarcely longer than third. Legs brown, claws small, connate for about one-half their length. Length 2 mm.; .075 inch.

Two specimens, Detroit, Michigan; Messrs. Hubbard and Schwarz. An inconspicuous species, which may be easily recognized by the foregoing characters.

14. **S. corniculatus.** *Tychius corn.*, Fahræus, Sch. Curc. vii., 2d, 309.

Middle and Western States. A very small species, easily known by the narrow scales and rounded sides of the prothorax. Length 1.6 mm.; .065 inch.

Dark brown, not very densely clothed with narrow, small, whitish and yellowish scales. Beak as usual. Prothorax as long as wide, narrowed in front, much rounded on the sides, convex, densely and coarsely punctured. Elytra suddenly one-half wider than the prothorax, elongate, not rounded on the sides, striæ deep, punctured, interspaces flat. Antennæ and legs paler brown. Claws very small, partly connate.

Kansas; one specimen. A very small species, related to *S. tychioides*, and easily known by the narrow scales and rounded sides of the prothorax. The scales are partly abraded, but appear to be mottled in color.

Group III. **Eugnomi.**

Following the example of Lacordaire, I recognize as a distinct group a small number of genera which are closely related to the *Erirhini* proper, and like them have the antennal grooves directed against the eyes; they differ in having the eyes larger and more prominent, and separated from the margin of the prothorax by the head being more or less prolonged behind. The head thus recalls the form already seen in *Rhinomacer* and *Rhynchites*, though otherwise there is no resemblance.

The two species in my collection resemble in appearance small *Dorytomus* but the thighs are unarmed, and the second joint of the funicle of the antennæ is short.

I will for the present refer them to the genus *Phyllotrox*, though they differ from the description given by Lacordaire (Gen. Col. vi, 505), by the first ventral suture being well-marked.

PHYLLOTROX Sch.

1. **P. nubifer,** n. sp.

Elongate, fuscous, thinly clothed with golden pubescence; antennæ, legs and elytra fulvous, the latter with the suture and scutellar region more or less blackish. Length 1.8–2.3 mm.; .075–.09 inch.

San Francisco, California; collected by myself.

Beak rather stout, nearly as long as the prothorax, punctured, feebly channeled from between the antennæ for a short distance; eyes rather large, prominent; antennæ yellow, with the scape reaching to the eyes. First joint of funicle stout, and moderately long, followed by six short joints, club oval, pubescent. Prothorax not lobed behind the eyes, longer than wide, narrowed in front, feebly rounded on the sides, slightly constricted near the tip, rather densely punctured, thinly clothed with shining yellow hair. Elytra wider than the prothorax, elongate, humeri rounded, striæ with close-set punctures, interspaces densely punctulate, and sparsely pubescent, brownish-yellow, with the scutellar region and frequently the suture dark. Body beneath dark, strongly punctured; abdomen and legs brownish-yellow. Thighs not toothed, rather thick; tibiæ stout, truncate and not armed at tip, tarsi rather broad, third joint wider, deeply bilobed; claws simple, divergent.

This insect strongly resembles the figure of *Brachonyx indigena* Herbst, as given by Duval, Gen. Col. Eur. iv, pl. 19.

I have seen a variety from Colorado in the collection of Mr. Ulke, in which the color is bright yellow, only the head, trunk beneath, and the suture near the base of the elytra are dark.

2. **P. ferrugineus,** n. sp.

Smaller than the preceding, entirely ferruginous, sparsely pubescent, Beak slender, curved, longer than the prothorax, sparsely punctured, eyes smaller, prominent; head punctured. Prothorax scarcely longer than wide, gradually narrowed in front, feebly rounded on the sides, slightly constricted near the tip, strongly not densely punctured. Elytra wider than the prothorax, humeri rounded, striæ deeper and more strongly punctured than in the preceding, interspaces more convex and less punctulate. Body beneath coarsely punctured. Length 1.5 mm.; .06 inch.

One specimen, Florida; collected by Dr. E. Brendel.

Group IV. **Cryptopli.**

In this group the body is densely clothed with scales, forming usually a shining crust; the beak is cylindrical and curved, not separated from the head by a transverse impression; the antennal grooves commence about one-third from the end, and run directly towards the eyes which are lateral, oval, transverse, coarsely granulated and not approximate beneath. Funiculus of the antennæ in some genera 6-jointed; first joint long, the others short, increasing gradually in breadth, and sometimes passing insensibly into the club, which is rather large, oval, annulated and pubescent. Prothorax with broad postocular lobes, front coxæ large, prominent, contiguous, prosternum transversely, very deeply impressed but not excavated in front of the coxæ, or deeply emarginate. The legs are not very slender, the thighs moderately clavate, the tibiæ sinuate on the inner side, as long as the thighs, truncate and mucronate at tip, with the articular surface terminal; the front tibiæ sub-serrate from the middle to the tip. Tarsi broad with the fourth joint short, variable in form (absent in the European *Anoplus*), third joint broad deeply bilobed. Elytra with ten entire striæ.

Last joint of tarsi broad, claws distant................ 2.
" " narrow, with one claw.............. BRACHYBAMUS.
" " " projecting, with two slender claws.. ONYCHYLIS.
Elytra slightly wider than the prothorax............. ENDALUS.
" much " " .... TANYSPHYRUS.

ENDALUS Lap.

This genus was first described by Schönherr, under the previously used name *Notiophilus*. The error was recognized and corrected in Vol. vii of his work, and the name changed to *Notiodes*. Meanwhile, however, *Endalus* had been proposed by Laporte, in a systematic work, and being accompanied by proper description must of course take precedence. The species occur on grasses near water; of those described thus far, only one properly belongs to the genus, the others will be found under *Onychylis* and *Lissorhoptrus*. The funicle is 6-jointed, and in some of the species passes gradually into the club.

The species form two groups, quite different in form, the elytra being very distinctly wider than the prothorax in the first.

A. Last joint of tarsi slightly prominent, claws moderately large, elytra wider than the prothorax.	
Scales with bristles intermixed	1. **setosus.**
" uniform, without bristles intermixed	**2.**
2. Prothorax not coarsely punctured	**3.**
" coarsely punctured	**4.**
3. Scales gray, length 4.5 mm	2. **limatulus.**
" bronzed, " 2 mm	3. **æratus.**
4. Prothorax scarcely wider than long.	4 **cribricollis.**
" transverse, constricted in front	5. **punctatus.**
B. Last joint of tarsi not prominent; body oval	6. **ovalis.**

1. **E. setosus**, n. sp.

Dark brown, with scattered short erect bristles, prothorax broader than long, much rounded on the sides, suddenly narrowed and constricted at the tip, deeply and closely though not coarsely punctured, marked with four narrow lines of pale scales having a metallic lustre. Elytra a little wider than the prothorax, elongate; humeri rounded, not oblique, sides feebly converging behind, tip obliquely narrowed, uniform brown; striæ fine, interspaces feebly convex; sides as far as the eighth stria, and under surface, covered with pale scales; antennæ and legs ferruginous. Length 4 mm.; .16 inch.

Texas; Mr. Belfrage. The last tarsal joint is broad, and extends slightly beyond the lobes of the third joint; the claws are large and divaricate. The prothorax differs in form in the two sexes, in the same manner as in the next species.

Two smaller specimens are entirely similar to the preceding in form and sculpture, the elytra are covered with dirty gray scales, with a large common discoidal dark brown spot, extending from the base for four-fifths of the length, with prolongations on the third and fifth interspaces, causing the outline to be irregular; there are also two clouds on the sixth interspace, and one at the humerus. Length 3.5 mm.; .14 inch.

Middle States not rare; Kansas, Texas. The prothorax is much more rounded on the sides in the ♂ than in the ♀.

3. **E. limatulus** Lap., Hist. Nat. An. Artic. ii, 339 (1840); *Notiophilus* ‖ *lim.* Gyll., Sch. Curc. iii, 319; *Notiodes lim.* ib. vii, 2, 183.

4. **E. æratus**, n. sp.

Smaller, dark brown, covered with gray and brown scales having a metallic reflection; prothorax a little wider than long, sides rounded especially in front, tip narrowed and constricted, punctures deep and close, not coarse; disc with two brown vittæ. Elytra suddenly one-half wider than the prothorax, humeri oblique, obtuse, feebly rounded; striæ composed of approximate quadrate punctures, interspaces not convex, disc with a large common brown cloud extending from the base thee-fourths the length; suture for the same distance blackish; beneath dirty gray. Length 2.3 mm.; .09 inch.

• Two specimens, Texas: Mr. Belfrage. Tarsi as in the preceding species. In some specimens the variation in tint is scarcely apparent, and the whole upper surface is of a dull golden color.

5. **E. cribricollis**, n. sp.

Blackish brown, covered with grayish scales; prothorax subquadrate, scarcely wider than long, sides nearly straight, a little rounded near the tip, which is constricted; surface very coarsely and deeply punctured. Elytra suddenly one-third wider than the prothorax, humeri rounded, striæ deep, slightly punctured, interspaces nearly flat, disc with a faint brownish cloud behind the middle. Length 2.3 mm.; .09 inch.

One specimen, Georgia. The last tarsal joint is a little shorter, and the claws smaller than in the preceding species.

6. **E. punctatus**, n. sp.

Smaller and more robust than *E. cribricollis*, with the prothorax wider than long, more deeply constricted at tip, and somewhat less coarsely punctured. Elytra a little wider than the prothorax brown, with a darker sutural stripe; striæ deep, more distinctly punctured; legs dark testaceous. Length 1.8 mm.; .075 inch.

One specimen, Texas; Mr. Belfrage. The last tarsal joint and the claws still smaller than in *E. cribricollis*.

7. **E. ovalis**, n. sp.

Almost regularly oval, black, mottled with pale gray scales. Prothorax wider than long, narrowed from the base forwards, rounded on the sides, strongly constricted at the tip, surface deeply but not coarsely punctured, with three pale vittæ. Elytra very little wider than the prothorax; gray, with a abbreviated sutural stripe, and frequently some mottlings of dark brown; striæ deep, feebly punctured. Length 2.3 mm.; .09 inch.

New York and California. The color depends on the extent to which the crust of gray scales is preserved.

Several much smaller specimens from California, Florida and Lake Superior have the prothorax comparatively more coarsely punctured, but do not show any other difference. Length 1.5 mm.; .06 inch.

TANYSPHYRUS Sch.

This genus barely differs from *Endalus* by the funicle of the antennæ more slender, with the joints scarcely increasing in thickness; the prothorax narrower, and scarcely rounded on the sides; and the elytra fully one-half wider than the prothorax, truncate at base, with the humeri more prominent and slightly oblique. The last joint of the tarsi does not project beyond the lobes of the third, and the claws are distant and divaricated as in *Endalus*.

As Lacordaire observes, it resembles in miniature a *Grypidius*.

1. **T. lemnæ** Gyll., Sch. Curc. ii, 332; Duval, Gen. Col. Eur. iv. pl. 10; f. 47. *Rhynchænus lemn.* Fabr., Syst. El. ii, 455; cum mult. syn. Europ.

Detroit, Mich.; Messrs. Hubbard and Schwarz. A very small insect (1.2 mm.; .05 inch), of dull black color, mottled on the elytra with gray scales; antennæ and feet brown. It agrees so accurately with the description and figure of the European species that I am not warranted in considering it as distinct.

BRACHYBAMUS Germ.

The species mentioned below resembles in form *Bagous*, but is at once recognized by the last tarsal joint having but one claw; a very rare character, occurring in but two other genera in our fauna, *Mononychus* and *Barilepton*, which have otherwise no resemblance to this genus, nor to each other.

1. **B. electus** Germ., Sch. Curc. iii, 331; Boh., ibid. vii, 2, 185.

Middle and Southern States. The specimens in my collection agree fully with the detailed description last cited, but the prothorax is constricted near the tip, as described in the next. I think, however, that the differences mentioned are illusory, and that there is probably but one species in our fauna.

2. **B. inceratus** Boh., Sch. Curc. vii, 2, 186.

Boston; coll. Chevrolat. Unknown to me; said to differ from the preceding chiefly by the second interspace of the elytra being wider and somewhat elevated.

ONYCHYLIS n. g.

The species which constitute this genus are very similar to certain *Bagous* in form, size and sculpture, but differ by having the last tarsal joint comparatively smaller, and the claws slender and smaller. They also differ by having the articular surface of the hind tibiæ apical, and not lateral; the edge of the articular surface is fringed with small spines as in many *Erirhini*, and the spine at the inner side is long and slender, resembling at first sight the terminal hook of *Bagous*. The funiculus is 6-jointed; first joint longer and stouter, second a little longer than the third; 3–6 gradually a little broader, not merging into the club. The third joint of the tarsi is moderately dilated and bilobed; fourth joint extending beyond it.

Elytra without rows of setæ.. 2.
Alternate interspaces with a row of distant setæ.......... **3. alternans.**
2. Body rather stout.. **1. nigrirostris.**
 " more elongate.. **2. longulus.**

1. **O. nigrirostris** (Boh.) Sch. Curc. vii, 2nd, 184, (*Notiodes*).

Southern and Western States; Michigan to Florida. The beak is black, shining and naked in ♀; clothed with a dense coating of small scales in ♂; the anal segment frequently projects, and is visible beyond the elytra.

This species differs from the next by the stouter form, and the prothorax broader than long, more rounded on the sides, and more strongly constricted near the tip. Well preserved specimens are covered with a uniform crust of dirty gray scales; the middle of the prothorax and the disc of the elytra are most frequently abraded, so as to produce a pattern varying in extent and width. Too much care cannot be exercised in the study of the species of this and the next group, to avoid the deceptive influences of abrasion; the specific determinations should be always made upon form, structure and sculpture, disregarding color and pattern as of small importance. Length 3 mm.; .12 inch.

2. **O. longulus**, n. sp.

Black, covered with a uniform crust of dirty gray scales, as in the preceding species; antennæ testaceous, club fuscous. Prothorax as long as wide, slightly rounded on the sides, feebly constricted in front, very coarsely punctured, punctures barely visible through the scales. Elytra nearly one-half wider than the prothorax; humeri oblique, obtuse; sides parallel for two-thirds the length, then rounded to the tip; striæ well impressed, interspaces slightly convex, alternate ones slightly tesselated, without setæ. Length 3 mm.; .12 inch.

One specimen, Michigan; Messrs. Hubbard and Schwarz. Only differs from the preceding by the narrower form, and more coarsely though less distinctly punctured prothorax.

Without examination of the characters of the group and genus, this species might be readily confounded with *Lissorhoptrus simplex.*

3. **O. alternans**, n. sp.

Blackish, sparsely setose and covered with a mud colored crust; beak cylindrical, curved, as long as the head and prothorax; the latter wider than long, feebly rounded on the sides, slightly narrowed but not constricted in front, coarsely and thickly punctured. Elytra one-third wider, humeri oblique, prominent, disc rather flattened in front; striæ and punctures obscured by the crust, alternate interspaces distinctly elevated, and furnished with a row of distant rather long bristles; tibiæ rather stout, curved, with a moderate hook at tip; tarsi narrower than in the preceding species, so that the last joint seems to project farther, though it is not really longer. Length 2.5 mm.; 10 inch.

Texas; Belfrage; two specimens.

Group V. **Stenopelmi.**

This genus is included by Lacordaire in his group *Storeides*, but it seems to me that the remarkable combination of characters requires that it should be received as a separate group, with the following definition:

Body clothed with a dense crust of scales; beak short and broad, not longer than the head; antennal grooves very short. Antennæ inserted on the upper rather than the lateral surface, scape long, reaching to the back part of the eyes, which are round, and coarsely granulated; funiculus 7-jointed, first joint longer and stouter, remaining joints short, closely united; club oval, pointed, entirely pubescent, annulated. Prothorax obliquely truncate in front, without postocular lobes, longer on the disc than at the sides; prosternum extremely short, not emarginate in front. Elytra much wider than the prothorax, humeri nearly rectangular. Ventral segments, first, second and fifth very large, third and fourth very short, last ventral suture slightly curved. Legs slender, thighs not toothed; tibiæ truncate at tip, very slightly mucronate; tarsi narrow, third joint not broader, slightly emarginate; fourth joint as long as the two preceding; claws slender, divergent.

This group diverges towards *Prionomerus* in the form of the head and antennæ, but otherwise has no resemblance to that genus.

STENOPELMUS Sch.

1. **S. rufinasus** Gyll., Sch. Curc. iii, 469; *Panscopus*‖ *ruf.* Sch., ibid. vii, 2, 351; *Monius ruf.* Sch., ibid. (corrigenda) viii, 2nd, 501.

Southern and Western States, to California, where it was found abundantly by Mr. Crotch and myself at San Diego. The reason given by Schönherr for changing the name under which he first defined this genus is not a valid one. Even if there were in Dejean's Catalogue a genus *Stenopelmus* (which is not the case in the latest edition), it could have no precedence over the name as substantiated by description. The use of *Monius* to indicate this genus is therefore incorrect.

Group VI. **Brachypi.**

The genus *Brachypus* is placed by Lacordaire in his group *Erirhinides*; it differs from the other genera of that division by the narrow linear form. Though the three species described below, do not exactly agree with the generic description given by Schönherr and Lacordaire, I think that they accord sufficiently to indicate the propriety of associating them together as a special group.

As here established, the *Brachypi* are nearly related to *Hydronomi*, but differ by the third joint of the tarsi being more or less bilobed, and the hind tibiæ truncate at tip, not unguiculate, but only feebly mucronate, with the articular surface terminal. The tarsi are either broad or narrow, the third joint sometimes but little dilated, and the last joint long, with large divergent claws. The body is narrow, covered with a dense water-proof crust of scales, as in *Cryptopli* and *Hydronomi*. The beak is straight, cylindrical, moderately stout, and as long as the prothorax; the antennal grooves run directly to the eyes and converge but slightly behind; they commence at a varying distance from the mouth. The antennæ are slender; funicle 7-jointed, first and second joints elongated in our genera, 3–7 gradually broader, club oblong-oval, annulated, entirely covered with sensitive surface. Prothorax with large postocular lobes, prosternum deeply emarginate beneath, not excavated. Legs long, slender, thighs moderately clavate, front and middle tibiæ slightly sinuate, feebly mucronate at tip.

Tibiæ not serrate on the inner side........................ **ANCHODEMUS.**
Front and middle tibiæ serrate.............................. **LIXELLUS.**

ANCHODEMUS n. g.

I have established this genus upon three narrow species resembling in form the European *Bagous* (*Lyprus*) *cylindrus*, but quite different by the prosternum not being excavated, and by the tarsi broad and hairy, the first and second joints as wide as long, third wider, deeply bilobed; fourth as long as the two preceding united, claws large, divergent; antennæ inserted about one-fourth from the end of the beak, scape reaching the eyes; funiculus 7-jointed; first joint stouter, second equal in length to the first, 3–7 short and gradually broader; club elongate, annulated. Beak as long as the prothorax, not very slender, cylindrical; antennal grooves commencing one-third from the tip, scarcely attaining the eyes, which are large, transverse, and rather coarsely granulated. Prosternum broad, somewhat flattened, emarginate in front, not sulcate; postocular lobes distinct, coxæ large, prominent, with a deep transverse impression in front of the coxæ.

Scales brownish-gray, not mottled.............................. 1. **angustus.**
" grayish-white, " " .... 2. **Hubbardi.**
" brown, elytra with a paler band........................ 3. **Schwarzi.**

1 A. **angustus**, n. sp.

Elongate, blackish-brown, covered with a dirt-colored crust; beak slender, tip naked and shining; prothorax longer than wide, sides parallel, a little narrowed and rounded near the tip, which is constricted, base oblique each side, obtusely angulated at the middle. Elytra about one fourth wider than the prothorax and three times as long, humeri oblique, angulated; striæ punctured, interspaces nearly flat, each with a row of very small bristles. Tibiæ slender, slightly bent; apical hook small; antennæ and legs testaceous; second joint of funicle but little longer than first. Length 4 mm.; .15 inch.

Michigan, Hubbard and Schwarz; Illinois, Walsh; New York, Ulke. Greatly resembles in appearance *Hydronomus alismatis* of Europe.

2. A. **Hubbardi**, n. sp.

Elongate, black, covered with a dense crust of grayish-white scales. Beak, antennæ, and legs, yellow-brown. Beak as long as the prothorax, nearly straight, naked, shining, finely punctulate and slightly pubescent at the base, where it is finely carinate and feebly bisulcate; frontal fovea distinct. Prothorax not longer than wide, slightly rounded on the sides, distinctly constricted near the tip. Elytra about one fourth wider than the prothorax, humeri rounded, sides parallel, then obliquely narrowed, tips separately acuminate and rounded, and slightly thickened; striæ obscured by the scales, shallow and punctured. Antennæ with the second joint of the funicle twice as long as the first. Tarsi with the third joint bilobed, scarcely wider than the second. Length 7.5 mm.; .30 inch.

Detroit, Michigan; Messrs. Hubbard & Schwarz. A fine species, of large size for the tribe to which it belongs.

3. **A. Schwarzi**, n. sp.

Elongate, brown, densely clothed with brown scales; prothorax trivittate with paler; elytra clouded with pale, and with a broad conspicuous common angulated band behind the middle, having the angle at the suture directed forwards. Beak as long as the prothorax, stouter than in the other two species, straight, densely punctured, slightly pubescent, not shining. Prothorax a little longer than wide, very slightly rounded on the sides, not constricted in front. Elytra more than one-third wider than the prothorax, humeri oblique, slightly rounded; striæ fine, well impressed, finely punctured; tips conjointly rounded. Antennæ and legs yellow-brown; second joint of funicle scarcely longer than the first; third joint of tarsi broad, bilobed. Length 4.5 mm.; .175 inch.

One specimen, Detroit, Michigan; Messrs. Hubbard & Schwarz. Easily recognized by the stouter beak, and conspicuous paler band of the elytra.

LIXELLUS n. g.

A small species of still narrower form constitutes this genus. It has precisely the appearance in miniature of a slender *Lixus*, and differs from *Anchodemus* by the third joint of the tarsi being not wider than the second, and not bilobed; the fourth tarsal joint is as long as the others united, and the claws are large and divergent. The thighs are less clavate, the tibiæ strongly bent, and the front and middle pairs are serrate on the inner edge from the middle to the tip; they are all feebly mucronate at tip. The beak is shorter than the prothorax, rather stout, nearly straight, and the antennal grooves commence near the tip; the funiculus is 6-jointed, with the first and second joints longer, the joints 3–6 short, slightly wider, club elongate oval, acute, annulated, pubescent.

L. filiformis, n. sp.

Very elongate, cylindrical, black, covered with extremely small brown scales, mottled in color. Beak opaque, punctulate, and scaly. Prothorax longer than wide, feebly constricted in front, sides nearly straight, very densely punctulate. Elytra little wider than the prothorax, striæ punctured, interspaces flat; tips conjointly rounded; antennæ and legs yellow-brown. Length 4.3 mm.; .17 inch.

One specimen from Canada, and one from Oregon.

Group VII. **Hydronomi.**

The same varnish-like covering noticed in the three preceding groups is retained in this, the species of which are also found on plants near water. They are easily distinguished by the longer and more slender legs, the tibiæ curved, and frequently serrate on the inner side and strongly hooked at tip. The tarsi are usually slender, the third joint frequently not dilated, and the last joint moderate or very long, with stout, simple, divergent claws. The prosternum is usually broadly sulcate.

Our genera may be tabulated as follows:

Club of antennæ entirely sensitive.......... .... 2.
" " partly smooth and shining; prosternum not excavated................................ LISSORHOPTRUS.
2. Prothorax feebly constricted in front............. BAGOUS.
" very strongly constricted in front.... PNIGODES.

LISSORHOPTRUS n. g.

This is the genus indicated without characters, and not named by Lacordaire.* It is founded upon *Bagous simplex* Say. It differs remarkably from the other genera of the group by the antennæ, the club of which is smooth and shining for two-thirds the length, and annulated only near the tip; the funiculus has but six joints, of which the first is stout, and the second a little longer than the others, which increase slightly in thickness. The prosternum is flattened, not excavated, transversely impressed in front of the coxæ, which are very large; tibiæ not very slender, somewhat curved, armed with a terminal hook. Tarsi narrow, last joint as long as the two preceding, claws slender, approximate. Beak stout, as long as the prothorax. Antennal grooves suddenly deflexed.

This is again a genus of transition, and only differs from *Onychylis* by the third joint of tarsi not emarginate, by the peculiar antennal club, by the tibiæ armed with stronger terminal hook, and the articular surface even of the hind pair lateral.

1. **L. simplex.** *Bagous simplex* Say, Curc. 29; ed. Lec. i, 297; *Bagous egenus* Gyll., Sch. Curc. iii, 549; *Notiodes eg.* ibid. vii, 2, 184.

Middle and Southern States to Texas. Say's description is far from sufficient.

2. **L. apiculatus.** *Notiodes apiculatus* Gyll., Sch. Curc. iii, 320.

Southern States and Texas. Only differs from the preceding by the usually larger size, and by the transverse impression at the middle of the sides of the prothorax being wanting.

BAGOUS Germ.

The essential characters of this genus consist, in my opinion, in the tibiæ being slender, strongly curved and armed at the tip with a strong hook, so that the articular surfaces become lateral; the tarsi are narrow, not spongy beneath, though the third joint is sometimes wider and emarginate. The claws are divergent, sometimes rather large. The club of the antennæ is entirely pubescent, sensitive, and larger than usual; the antennal grooves are deep and extend to the eyes; the beak varies in form. The prosternum is broadly and deeply excavated in front of the coxæ, and the groove is sharply limited at the sides by ridges; the postocular lobes are large.

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* Gen. Col. vi, 489, note 2.

The species may be thus separated:

Third joint of tarsi broader, emarginate......... 2.
" " narrow, not emarginate...... 5.
2. Elytra each with one posterior tubercle......... 3.
" " two " tubercles....... 1. **mammillatus.**
3. Interspaces equal, flat, or nearly so............. 4.
Alternate interspaces more elevated............ 2. **sellatus.**
4. Scales uniform pale gray, striæ less deep........ 3. **planatus.**
" gray and dark brown; striæ deeper...... 4. **obliquus.**
5. Tarsi very long, prothorax finely rugose........ 5. **americanus.**
" short; prothorax scarred with deep impressions.................................. 6.
Tarsi short, or moderate, prothorax strongly granulate.............. .... 7.
Tarsi short, or moderate, prothorax feebly granulate....................................... 8.
6. Front deeply excavated, beak tricarinate.,...... 6. **cavifrons.**
" foveate, beak tricarinate................. 7. **magister.**
7. Elytra clouded with darker scales; beak long, tarsi short.................................. 8. **nebulosus.**
Elytra uniform in color; beak short, tarsi long.. 9. **californicus.**
" with a white spot behind, beak short, tarsi long.................................... 10. **restrictus.**
Elytra with a broad black band, beak short, tarsi long.. 11. **pusillus.**
8. Prothorax not transverse...................... 12. **bituberosus.**
" wider than long, much constricted in front.................................... 13. **transversus.**

1. B. **mammillatus** Say, Curc. 28, ed. Lec. i, 297; Gyll., Sch. Curc. iii, 539.

Southern and Western States. Varies in size from 2.4–3 mm.; .09–1.3 inch.

2. B. **sellatus**, n. sp.

Black; head, three thoracic vittæ, sides and tip of elytra densely covered with cinereous scales, leaving a large elongate common triangular space black. Prothorax a little longer than wide, coarsely granulate, sides parallel, suddenly constricted near the tip. Elytra with the humeri oblique and obtusely angulated, striæ deep, interspaces convex, first, third, and fifth more elevated, the last terminating in a large conical tuberosity, which is surrounded behind by a dark cloud. Beneath fuscous, thighs with a ring of paler scales. Tarsi with the third joint broader, emarginate. Length 2.5 mm.; .10 inch.

One specimen, Georgia. The common triangular spot extends from the humeri to the suture upon which it ends at about two-thirds the length; there is also on each elytron a marginal cloud behind the humerus, and a small subapical one behind the large tuberosity.

3. **B. planatus**, n. sp.

Black, uniformly and densely clothed with dark cinereous scales. Beak punctured, nearly naked, stout, curved, nearly as long as the prothorax; the latter is a little longer than wide, sides parallel, suddenly constricted near the tip, disc coarsely granulate, feebly channeled. Elytra wider than the prothorax, humeri less oblique, angulated, more prominent, striæ fine, interspaces very flat, fifth with a conical tubercle on the posterior declivity, third with an obsolete elevation at about two-thirds the length. Antennæ and feet dark testaceous; tarsi with third joint broader, emarginate. Length 3 mm.; .12 inch.

Lake Superior and New York. Related to *B. mammillatus*, but the striæ of the elytra are finer, the interspaces still more flat, the tubercles much smaller, the anterior one being hardly apparent, and the scales purer gray, approaching lead color.

4. **B. obliquus**, n. sp.

Rather elongate, black, variegated with pale and dark-brown scales. Beak as long as the prothorax, stout, curved, flattened above, lateral grooves not deep; front with a short impressed line. Prothorax longer than wide, broadly constricted at some distance from the tip; coarsely granulated, dark brown with a broad pale lateral stripe. Elytra nearly one-half wider than prothorax, humeri oblique, rounded, posterior callus not very prominent, apex oblique, narrowly rounded; striæ deep, interspaces slightly convex; dark brown, with an oblique pale band commencing at the humerus and reaching the suture a little behind the middle; there are also a few pale spots on the third and fourth interspaces. Antennæ and legs brown, third joint of tarsi a little wider, emarginate; claws small. Length 2.3 mm.; .09 inch.

Detroit, Michigan, and Florida; Messrs. Hubbard and Schwarz; many specimens. The prothorax varies slightly in form; the sides are nearly straight behind, and usually parallel; sometimes, however, they converge slightly, so that the widest part is in front of the middle. The last joint of the tarsi is shorter and the claws smaller than in *B. planatus*.

5. **B. americanus**, n. sp.

Elongate, black or brown, covered uniformly with silvery-gray scales; prothorax longer than wide, sides feebly rounded, a little narrowed and broadly constricted near the tip, obscurely granulate. Elytra wider than the prothorax, humeral angles obtuse, almost rounded, striæ fine, distinctly punctured. Antennæ and legs testaceous, the latter long and slender, tibiæ strongly hooked, curved and armed with a row of small distant teeth on the inner face. Tarsi longer than usual, joints 1–3 equal, fourth equal to the two preceding. Length 4 mm.; .16 inch.

Middle States and Canada. I have adopted the name given in Dejean's Catalogue. Easily known by its large size and elongate form; there is a marked difference in the beak of the two sexes; that of the male is stout, shining, very finely punctulate, not longer than the prothorax, and about one-half as wide as the head; in the female it is slender, one-third longer, and with the antennæ inserted about the middle of the length.

6. **B. cavifrons**, n. sp.

Black, covered with slaty-black scales. Beak shorter than the prothorax, rather stout, scarcely curved, flattened above and finely tricarinate, lateral grooves deep; front deeply excavated between the eyes. Prothorax longer than wide, gradually slightly narrowed in front, constricted near the tip, sides not rounded; undulated by deep, distant anastomosing grooves, of which the most conspicuous forms a dorsal channel; surface not coarsely granulated. Elytra nearly one-half wider than the prothorax, humeri oblique, scarcely rounded, sides converging behind, tip more elongated and more narrowly rounded than in the next species; posterior callus prominent, striæ punctured; interspaces broad, slightly uneven, each with a row of very short whitish bristles; each side just behind the middle is a small oblique spot of white scales, extending from the fifth to the second stria. Antennæ and legs nearly black; tibiæ long, much curved; tarsi short, slender. Length 4.3 mm.; .17 inch.

Enterprize, Florida; May; one specimen; Messrs. Schwarz and Hubbard. Closely related to the next, but differs by the deeply excavated front, and elytra more narrowly rounded at tip.

7. **B. magister**, n. sp.

Blackish-brown, covered with dark-brown scales. Beak as long as the prothorax, rather stout, slightly curved, somewhat flattened above, and feebly tricarinate, lateral grooves deep; front with an elongate large fovea between the eyes. Prothorax longer than wide, sinuate on the sides, more narrowed towards the tip, and deeply constricted; surface deeply sculptured with anastomosing grooves, with a broad dorsal channel behind the middle; not coarsely granulated. Elytra nearly one-half wider than the prothorax, more oblong than in *B. cavifrons*, humeri less oblique and more rounded, tips more obtusely rounded; posterior callus prominent; striæ coarsely punctured; interspaces slightly convex, each with a row of very short distant bristles; just behind the middle is a transverse spot of pale scales extending from the fifth to the third stria; the alternate interspaces are variegated with pale-brown spots. Antennæ and legs nearly black; tibiæ less slender than in *B. cavifrons*, tarsi a little longer. Length 5 mm.; .20 inch.

Texas, Belfrage: Detroit, Hubbard and Schwarz; Canada.

8. **B. nebulosus**, n. sp.

Rather robust, black, clothed with dirty gray scales, variegated with darker and paler. Beak slender, curved, finely punctulate, naked, except at base, as long as the prothorax; front feebly channeled. Prothorax wider than long, coarsely granulated, sides nearly straight for more than two-thirds the length, then obliquely narrowed and feebly constricted. Elytra less than one-half wider than the prothorax, oblong, impressed obliquely behind the base; humeri prominent, rounded, tips broadly rounded, separately sub-acuminate; striæ punctured, interspaces slightly convex, each with a row of rather long reclinate bristles; posterior callus not prominent. Antennæ and legs dark; tarsi short. Length 3.2 mm.; .125 inch.

One specimen, Point Huron, Mich.; Hubbard and Schwarz.

The markings of the elytra are not very distinct; the most conspicuous is a pale stripe extending on the fifth and sixth interspaces from the oblique impression to behind the middle, where it is flexed rectangularly and runs to the suture.

9. B. **californicus**, n. sp.

Rather robust, black, clothed with dark-gray scales of uniform color. Beak stout, curved, shorter than the prothorax, scaly; frontal fovea not deep. Prothorax wider than long, coarsely granulated and rugose; sides straight, diverging slightly from the base for two-thirds the length, then rounded and narrowed to the tip, where it is strongly constricted; with a broad dorsal channel near the base. Elytra nearly one-half wider than the prothorax, humeri oblique, slightly rounded; sides parallel, then obliquely narrowed, and narrowly rounded at the tip; disc flattened from the suture to the third stria, and from the base for three-fifths the length, striæ fine, interspaces slightly convex; posterior callus prominent; there is a feeble tubercle on the third interspace at about two-thirds the length. Antennæ and legs reddish-brown; tarsi long. Length 2.8 mm.; .11 inch.

One specimen, San Diego, Cal.; G. R. Crotch.

Differs from *B. restrictus* by the tubercle on the third interspace behind the middle, and by the absence of the white spot which occupies a similar position in that species.

10. B. **restrictus**, n. sp.

Black, covered with dirt-colored scales, beak subcarinate, nearly as long as the prothorax; the latter as wide as long, slightly wider from the base forwards, with the sides straight, for three-fourths the length, then rounded and suddenly constricted, more strongly than in the other species; coarsely granulate. Elytra with the humeri oblique, obtusely angulated, less prominent, striæ deep, interspaces convex, fifth terminating in a small conical tubercle, covered with white scales; there is also a small transverse white spot on the second and third interspaces at about two-thirds the length. Antennæ tibiæ and tarsi brown, third joint not dilated, fourth longer than the two preceding united. Length 2.5 mm.; .10 inch.

One specimen; Texas; Belfrage. The tarsi are more slender than in the neighboring species.

11. B. **pusillus**, n. sp.

Less robust, black, clothed with dirt-colored scales, elytra with a broad toothed transverse band behind the middle. Beak stout, curved, as long as the prothorax, scaly, frontal fovea faint. Prothorax about as wide as long, sides straight, suddenly rounded, narrowed and strongly constricted near the tip; coarsely granulated. Elytra nearly one-half wider than the prothorax, humeri prominent, oblique and rounded, sides nearly parallel, then oblique, tips rather broadly rounded, posterior callus small, very prominent; striæ fine, interspaces nearly flat. Antennæ and legs brown, tarsi long. Length 1.8 mm.; .07 inch.

Capron, Florida; Hubbard and Schwarz; one specimen.

The black band extends forwards to beyond the middle on the third, fourth and fifth interspaces, and is prolonged backwards on the fifth and sixth, as far as the callus.

12. **B. bituberosus**, n. sp.

Black, covered with dirt-colored scales. Beak stout, shorter than the prothorax, which is of the same form as in the preceding, feebly channeled and more finely granulate. Elytra wider than the prothorax, humeri less oblique, obtusely angulated, prominent; striæ deep, interspaces convex, fifth more elevated behind, and terminating in a large tuberosity; the third is a little wider and more convex than the adjoining ones. Antennæ, tibiæ and tarsi dark testaceous; third joint not dilated, fourth as long as the two preceding united. Length 3 mm.: .12 inch.

One specimen, Kansas; and one from Florida.

13. **B. transversus**, n. sp.

Robust, less convex, black, covered with blackish-gray scales. Beak stout, curved, as long as the prothorax, naked, punctulate, sub-carinate near the base, lateral grooves deep; frontal fovea large. Prothorax nearly one-half wider than long, sides sinuate, very strongly constricted in front, very finely granulate. Elytra uneven, marked with vague impressions, one-half wider than the prothorax, humeri prominent, slightly rounded, posterior callus large, obtuse; striæ fine, interspaces feebly convex. Antennæ and legs nearly black, tarsi moderately long. Length 2.3 mm.; .15 inch.

Detroit, one specimen; Hubbard and Schwarz. Remarkable for the form of the prothorax, by which an excellent transition to the next genus *Pnigodes* is established.

PNIGODES n. g.

This new genus is closely related to *Bagous*, and has the prosternum similarly excavated. There is also no difference in the beak, which is stout and curved, nor in the antennæ, which have the funicle 7-jointed; the first joint is stouter and the second longer than the others, which increase gradually in thickness, and the club is pubescent and annulated. The legs are stouter than in *Bagous*, the tibiæ sinuate on the inner side, hooked at tip; the tarsi rather short, joints 1–3 equal, fourth nearly as long as the others united, claws divergent.

The form of body is, however, remarkable. The prothorax is wider than long, narrowed behind, widely lobed on the sides before the middle, then suddenly and very strongly constricted and tubulate. The elytra are wider than the prothorax, with the alternate interspaces elevated, and a callus at the hind extremity of the fifth; the humeri are very prominent and rounded, not angulated.

1. **P. setosus**, n. sp.

Black, covered with a dirt-colored crust; prothorax deeply and broadly channeled; elytra finely striate with the alternate interspaces elevated, and bearing each a row of long bristles; a transverse common pale spot is seen behind the middle, extending from the suture to the third stria. The antennæ and legs are brown. Length 2.4–2.8 mm.; .09–.12 inch.

Texas, Belfrage; two specimens.

Group VIII. **Phycocœtes.**

This group is established upon one small species of pale brown color, which lives under sea-weed cast up by the waves at San Diego, California. It differs greatly from all the other members of the tribe, by the front coxæ which are not absolutely contiguous, but separated by a very narrow lamina of prosternum, and by the very short metasternum, only one-third the length of the first ventral segment.

In color, form and sculpture it resembles *Emphyastes*, but differs from that genus by such strong structural characters, that I cannot venture to place them together in one tribe.

Body clothed with very sparse pubescence. Beak cylindrical, slightly curved, as long as the prothorax, not very slender; mandibles of normal form; antennal grooves commencing near the tip, extending to the eyes, which are small, rounded, and coarsely granulated; front continuous with the beak. Antennæ with scape extending to the eyes, funicle 7-jointed, first joint stouter and longer, second nearly as long as the first, 3–6 rounded, seventh transverse, rounded; club rather small, oval, annulated, pubescent. Prothorax oval, longer than wide, rounded on the sides, not constricted nor lobed in front. Elytra oval, a little wider than the prothorax, humeri rounded, not prominent, base feebly emarginate. Prosternum rather long in front of the coxæ, flattened, not sulcate; joining the posterior point, so as to slightly separate the front coxæ which are large and globose. Mesosternum declivous, rather widely separating the middle coxæ; side pieces with the episterna very large, and the epimera very small, extending along the margin of the elytra. Metasternum very short, side pieces very narrow, but distinct; hind coxæ oval, very widely separated, extending to the margin of the elytra. Ventral segments, first longer than the second, separated by a sinuous suture; third and fourth united equal to second; fifth shorter than second, rounded at tip. Legs moderate, thighs clavate; tibiæ slender, nearly straight, slightly mucronate at tip, hind pair truncate, but without corbels; tarsi rather short, spongy beneath; third joint broader, deeply bilobed; fourth as long as the two preceding with rather large diverging simple claws.

The generic and group characters are combined in the above description.

PHYCOCŒTES n. g.

1. **Ph. testaceus**, n. sp.

Brownish yellow, darker beneath; above not very shining. Beak nearly smooth. Prothorax very sparsely punctured, with a hair proceeding from each puncture. Elytra elongate oval, a little wider than the prothorax; striæ punctured, becoming obsolete behind; interspaces each with a row of well-marked distant punctures, from which proceed fine hairs. Beneath finely and very sparsely punctured. Length, 2.5 mm.; .10 inch.

San Diego, on the shore of the bay, under sea-weed. ♂ with the first and second ventral segments broadly concave; anal segments large, prominent.

Tribe VI. TRACHODINI.

The genus *Trachodes*, which occurs in Europe, Asia and Alaska, differs sufficiently from all others in our fauna to merit being placed in a separate tribe. Lacordaire classed it with the *Molytini*, which however seems an unnatural grouping of genera agreeing only in convex body, short metasternum, and absence of wings. The beak is rather slender, as long as the prothorax; the antennæ are inserted a little before the middle (♀), or one-third from the end (♂), rather slender, the scape reaching the inferior margin of the eyes, which are nearly round, coarsely granulated, and somewhat removed from the prothorax; the funiculus is 7-jointed, first joint elongate and stout, second nearly as long, but slender, 3–7 short, slightly increasing in thickness; club rounded oval, about one-half longer than thick, annulated, pubescent, tip rather pointed. Prothorax scarcely lobed, but ciliate behind the eyes. Epimera of metathorax narrow, entirely covered by the elytra; hind coxæ rounded, widely separated, not attaining the elytral margin. Ventral segments, first and second large, each as long as the metasternum, separated by a straight suture which is deeply impressed at the sides; third and fourth short, sutures straight; fifth as long as the two preceding united. Legs rather long, thighs pedunculated, not toothed; tibiæ slender, strongly hooked at tip; tarsi rather long, third joint wider, bilobed, last joint elongate, claws simple, slender, separate. Body rough with short erect bristles.

TRACHODES Germ.

Elytra uniformly convex without elevations:
Bristles of elytra not tufted.................. 1. **ptinoides.**
Each elytron with two tufts of bristles....... 2. **quadrituberculatus.**
Elytra with large elevations............... 3. **horridus.**

1. **T. ptinoides** Germ., Sp. Nov. 327; Sch. Curc. iii, 513; Mann. Bull. Mosc. 1843, 293.

Alaska and Vancouver Island. I have received specimens of this species from Col. Motschulsky as his *T. fasciculatus*, Bull. Mosc. 1845, 2nd, 374.

2. **T. quadrituberculatus** Mann., Bull. Mosc. 1852, 355; *Sthereus quadr.* Motsch., ibid. 1845. ii, 375, Tab. vii, f. 4.

Alaska. The four tubercles of the elytra seem to me not elevations but bunches of bristles; they are situated on the third interspace; the first is about one-fifth from the base, and the second a little behind the middle; the elytral striæ are rather finer than in the preceding.

3. **T. horridus** Mann., Bull. Mosc. 1852, 354.

Alaska and Vancouver Island. The three rows of large elevations on each elytron easily distinguish this species.

Tribe VII. OTIDOCEPHALINI.

In all the preceding tribes the tarsal claws are simple, usually separate and divergent, rarely connate ; in this, as in several of those which follow, they are toothed ; the tooth, however, is broad and not very prominent, giving the form termed appendiculate. The species are easily known from those of other tribes by the prothorax being narrowed at base, and somewhat pedunculate. Several of them are shining black and glabrous, so that they resemble in appearance ants.

Mr. C. V. Riley, who has hatched several specimens of *Otidocephalus laevicollis* from the galls of *Cynips quercus-globulus,* informs me that they have a general resemblance to an apterous *Cynips.*

The other characters of the tribe and genus are as follows: Beak rather stout, straight, nearly as long as the prothorax, subcylindrical, not emarginate at tip; antennal grooves extending in front of the insertion of the antennæ, converging behind, directed below the eyes, which are distant from the prothorax, rounded, and finely granulated; mandibles of normal form, mentum and labial palpi small, gular peduncle narrow, long; antennæ inserted about one-third from the tip of the beak, scape long, slender, extending to the back part of the eyes; funicle 7-jointed; first joint stouter but only slightly longer than the second; 2–7 gradually a little wider, rounded; club oval pointed, pubescent, feebly annulated. Prothorax without postocular lobes; prosternum broad, short, not emarginate. Mesosternum very narrow between the coxæ, side pieces almost longitudinally divided. Metasternum long, side pieces very narrow. Ventral segments nearly equal, sutures straight, well marked, intercoxal process obtuse, moderately wide. Front coxæ rounded, prominent; middle coxæ rounded not prominent; hind coxæ oval, not extending to the elytral margin. Legs rather long, thighs somewhat clavate, usually toothed; tibiæ truncate at tip, not mucronate; articular surface terminal; tarsi dilated, spongy beneath, third joint broader, bilobed; claws divergent, more or less toothed. Elytra elongate-oval, convex, rounded at tip, entirely concealing the pygidium.

OTIDOCEPHALUS Chevr.

I have but one species to add to the synopsis given by Dr. Horn, in Proc Am. Phil. Soc. 1873, p. 448.*

O. dichrous, n. sp.

Dull ferruginous, with scattered white short hairs, prothorax one-half longer than wide, sides slightly rounded, narrowed behind, coarsely and rather densely punctured. Elytra elongate oval, wider behind the base, striæ composed of approximate punctures, hairs short, not erect, distant, arranged between the striæ; dull ferruginous at base for onethird the length, then black. Beneath dull ferruginous, punctured, with sparse short white hairs, thighs armed with a small tooth. Length 5 mm.; .20 inch.

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* *O. elegantulus* Summers, New Orleans, Our Home Journal, January 30th, 1875, and December 19th, 1875, does not belong to this genus, but to *Cylas*, a genus thus far known only from India and Africa. It will be found under the family *Brenthidæ.*

Florida, at Lake Harney and Enterprise, on old leaves of *Chamærops palmetto;* Messrs. Hubbard and Schwarz. Very distinct by the color and short, prostrate, sparse pubescence; differs from the Cuban *O. Poeyi* Chevr., by the distinctly dentate thighs.

Tribe VIII. MAGDALINI.

As the preceding tribe differs from all others with the front coxæ contiguous, by the pedunculate prothorax, so does this differ by the hind angles being prominent, and more or less produced over the base of the elytra.

The beak is slender, cylindrical, as long as the prothorax; the antennal grooves reach the lower edge of the eyes which are rounded and distant from the prothorax. Antennæ inserted near the tip, (♂), or about the middle of the beak ♀, slender, feebly geniculated; scape slender, slightly clavate, curved near the end, and usually attaining the eyes. Front coxæ contiguous, prominent; middle coxæ not widely separated; hind coxæ not very distant, small, oval, not extending to the elytral margin. Side pieces of mesothorax rather large, obliquely divided. Metasternum long, episterna rather wide; epimera visible behind, ventral segments unequal, first and second long, connate, with a faint undulated suture; inter-coxal process acute; segments 3–5 short, equal. Elytra oblong, not convex, widely separated at base by the scutellum, separately rounded at tip, exposing part of the pygidium. Legs moderate, thighs not clavate, sometimes toothed, tibiæ strongly unguiculate at tip; tarsi spongy beneath, third joint broader; bilobed; claws sometimes simple, sometimes toothed.

MAGDALIS Germ.

To the excellent synopsis of Dr. Horn, Proc. Amer. Phil. Soc. 1873, 452, I have but one species to add:

1. **M. aenescens**, n. sp.

Elongate, black bronzed, slightly pubescent; head, beak and prothorax densely finely punctured, the last longer than wide, rounded on the sides, which are serrate in front; hind angles small, prominent, base bisinuate, disc subcarinate in front of the middle. Elytra obliquely impressed behind the base, and also behind the middle; striæ composed of not very large punctures, interspaces finely rugose. Mesosternum not protuberant; thighs acutely toothed, claws distinctly toothed near the base. Length 3.7–5.6 mm.; .15–.22 inch.

Oregon, kindly given me by Mr. Ulke. Quite distinct by the color from all our other species. It should be placed between *M. barbita* and *olyra* in the synoptic table given by Dr. Horn.

Tribe IX. ANTHONOMINI.

This tribe is represented by a large number of species of small size, and constituting but few genera.

They may be distinguished by the following assemblage of characters:

Mandibles normal in form, gular peduncle long, mentum and ligula small. Beak long, slender, cylindrical; antennal grooves extending to the lower edge of the eyes, which are small, convex, rounded and distant from the prothorax, widely separated above, except in *Orchestes*, and a few species of *Anthonomus*. Antennæ inserted far from the tip of the beak, slender, scape long, funicle 6- or 7-jointed; club elongate-oval, pointed, entirely pubescent, and sensitive, very distinctly annulated, sometimes almost articulated, or divided into separate joints. Prothorax without postocular lobes, prosternum very short, not emarginate in front, coxæ contiguous, prominent. Mesosternum separating moderately the coxæ; side pieces diagonally divided. Metasternum moderately long, side pieces narrow, ventral segments separated by deep straight sutures, usually nearly equal; third and fourth segments short in *Alyca;* legs rather long; thighs frequently clavate and toothed; front and middle tibiæ with terminal hooks; hind tibiæ mucronate at tip, articular surface apical, and not lateral. Tarsi spongy beneath, third joint broad, bilobed, claws cleft, toothed, or appendiculate. The elytra are separately rounded at tip, so as to expose a portion of the pygidium in most of the species, but conjointly rounded in *Macrorhoptus* and *Alyca;* this exposure of the pygidium is however so slight in some species that it is evidently a character of no importance.

	Pygidium more or less exposed; claws toothed	2.
	" entirely covered..................	4.
2.	" and last ventral of ♂ normal......	3.
	" of ♂ perpendicular, last ventral short, emarginate....	COCCOTORUS.
3.	Eyes rounded distant, hind thighs normal....	ANTHONOMUS.
	" approximate above, hind thighs thickened.....................	ORCHESTES.
4.	Ventral segments nearly equal; claws toothed.	MACRORHOPTUS.
	" " very unequal; claws appendiculate.................................	ALYCA.

COCCOTORUS Lec.

This genus is established upon a species, remarkable as well for its habits as for the singular sexual characters of the ♂. In this sex, namely, the additional dorsal segment is large and perpendicular, or rather slightly inflexed, and the last ventral is broadly emarginate behind, so that at the middle it is shorter than the fourth segment. The elytra are more oblong than in *Anthonomus*, finely and densely pubescent, the striæ fine and the interspaces flat; at the base are two small tufts of hair on each side, and the suture is also tufted with longer hairs. The antennæ are slender, the first joint of the funiculus larger and stouter; second slender, not so long, 3–7 short, but not increasing in thickness, club elongate, oval, pointed, articulated. Thighs moderately clavate, armed with an acute tooth; front tibiæ with a terminal hook, middle and hind tibiæ truncate; claws separate, with an acute tooth, shorter than in *Anthonomus* and not curved inwards.

1. **C. scutellaris.** *Anthonomus scut.* Lec., Proc. Ac. Nat. Sc. Philada. 1858, 79; *Anth.? prunicida* Walsh, Prairie Farmer, June 13, 1863; Proc. Bost. Soc. Nat. Hist. ix, 309.

Illinois, Texas, Georgia.

The larva lives upon the kernel of the plum, like *Conotrachelus nenuphar.* Mr. Riley informs me that he has reason to believe that the egg is not pushed by the beak of the female deep into the fruit, as is the case with that species, but is laid on the surface, whence the larva, when first hatched burrows to the seeds.

Mr. Walsh very properly suspected that this insect should be separated as a distinct genus. I regret to have led him into error by not recognizing the species as identical with my previously described *A. scutellaris,* which was founded upon a much smaller specimen from a far distant locality.

ANTHONOMUS Germ.

The species of this genus are quite numerous, and although agreeing in the more important characters, differ in such manner as to indicate the propriety of future subdivision. For the purpose of making these subdivisions natural, a profound study of the exotic species will be necessary. I can at present merely mention some of the variant structures which I have observed.

The prosternum varies in length, being shortest in *A. elegans,* and longest in *A. rufipes* and *elongatus.* The fifth ventral segment is not longer than the fourth in most species, but in *A. elongatus* and some others of Division B it is quite distinctly longer and flatter, as in *Erirhinini,* and in these species the pygidium is not exposed. The ventral sutures are straight in most species, but the third and fourth are slightly curved in *A. conjunctus,* which thus shows a tendency towards *Tychius.* The claws are usually cleft, or armed with a long slender tooth; in certain species, as will be seen in the following table, the tooth is broad, or even so obtuse as to be indistinct. The funicle of the antennæ is usually 7-jointed, but in the species of Division C only six joints are observed.

These characters seem to be similar to those used by Lacordaire for separating the genera of *Anthonomini,* (Gen. Col. VI, 577), but on referring to the detailed descriptions, it will be found that in other respects the species in our fauna disagree. I, therefore, deem it more expedient to place them all in *Anthonomus.* The following table will enable most of them to be easily recognized.

A. Body above more or less pubescent, rarely with a few scattered scales. Funicle of antennæ 7-jointed.

Elytra not tuberculate........................ 2.
Elytra tuberculate, first joint of funiculus very long, second short, front thighs bidentate..... 1. **quadrigibbus.**
2. Funicle slender, first and second joints longer.... 3.
Funicle less slender, second joint equal to third.. 6.
3. Front thighs with a single tooth................ 4.
" " bidentate:
Teeth confluent, elytra pubescent............... 2. **nebulosus.**
Teeth separate, elytra with narrow pubescent markings................................. 3. **fulvus.**
One tooth and a small cusp; surface thinly pubescent, elytral striæ fine, head beneath squamose 4. **gularis.**
4. Elytra with white markings.................. 5.
Ferruginous, elytral striæ deep, interspaces convex... 5. **profundus.**
Black, prothorax densely punctured, sparsely squamose .... 6 **ater.**
Black, prothorax coarsely punctured, elytra brownish .... 7. **brunnipennis.**
5. Black, middle and hind thighs not toothed...... 8. **scutellatus.**
Brown or testaceous, with a dark elytral band; all the thighs toothed...................... 9. **signatus.**
6. Testaceous, rather densely pubescent........... 7.
Thinly pubescent, elytra and legs ferruginous .. 8.
Thinly pubescent, elytra partly or wholly black. 9.
Very small, ferruginous, sparsely squamose...... 21. **pusillus.**
7. Thighs strongly toothed, elytra without spots.... 10. **rubidus.**
Thighs feebly toothed, elytra with a dark band.. 11. **juniperinus.**
8. Elytra opaque, prothorax very coarsely punctured.................................... 12. **sycophanta.**
Elytra shining, prothorax less coarsely punctured.................................... 13. **rufipennis.**
9. Elytra with a few small spots of pubescence...... 10.
Elytra uniformly, thinly pubescent, without spots .... 12.
10. Front foveate............................... 11.
Front channeled.............................. 16. **sulcifrons.**
11. Elytra partly ferruginous, striæ coarse.......... 14. **suturalis.**
" reddish brown, striæ coarse............. 15. **musculus.**
12. Antennæ piceous, or nearly black.............. 13.
Antennæ yellow.............................. 17. **flavicornis.**
13. Elytral striæ coarsely punctured................ 14.
Elytral striæ finely punctured.................. 18. **morulus.**

14. Prothorax very coarsely punctured............ 19. nigrinus.
Smaller, prothorax less coarsely punctured...... 20. corvulus.

B. Body clothed above and beneath with dense scaly pubescence; funicle of antennæ 7-jointed.

Elytra at base suddenly wider than prothorax 2.
Elytra at base not wider than prothorax.......... 5.
2. Form robust.................................... 3.
" elongate.................................... 4.
3. Scales beautifully variegated.................... 22. elegans.
Scales uniform in color; second joint of funiculus longer than the third.................... 23. squamosus.
Elytra more or less vittate; 2d joint of funiculus scarcely longer than third.................... 24. tectus.
4. Pubescence more hair like, yellowish............ 25. hirtus.
Scales broad, whitish, thighs unarmed.......... 26. inermis.
Scaly, striped, white and brown................ 27. subvittatus.
Scales grayish, thighs toothed................... 28. pauperculus.
5. Funicle with second joint less elongate.......... 6.
" " " " more " .... 29. disjunctus.
6. Rather stout, legs ferruginous.................. 30. rufipes.
Elongate, legs brown........................... 31. elongatus.

C. Funicle of antennæ 6 jointed.

Claws with an acute tooth, as usual.............. 2.
" scarcely toothed.......................... 7.
" with a short tooth......................... 8.
2. Elongate, pubescent............................ 3.
Elongate, densely squamose..................... 4.
Robust, clothed with scales..................... 34. robustulus.
3. Ferruginous, without lustre, prothorax with a dorsal line of more dense pubescence........... 82. cratægi.
Fuscous sparsely pubescent, elytra with two bands of small spots........................... 33. subfasciatus.
4. Scales uniform in color .... 5.
" mottled................................... 38. decipieus.
5. Second joint of funicle equal to third........... 6.
" " " longer.................. 39. canus.
6. Length 2 mm.................................... 40. affinis.
Length 1.5 mm; smaller and narrower........... 41. nanus.
7. Elongate, sprinkled with scales.................. 35. nubilus.
" pubescent............................ 36. ungularis.
8. Elytra fuscous, with a posterior sutural spot testaceous, and bands of white pubescence...... 37. mixtus.

1. **A. quadrigibbus** Say, Curc. 15; ed. Lec. i, 277; Sch. Curc. iii, 334.

Massachusetts, Illinois, Texas. Varies in size from 3 mm. (.125 inch) to 5 mm. (.2 inch); the larger specimens are more robust and have the elytral tubercles much more developed, and the interspaces more uneven. The beak of the ♀ is longer, that of the ♂ shorter than the body.

2. **A. nebulosus**, n. sp.

Dark, rufous, clothed with rather coarse ochreous pubescence; beak punctured, finely carinate, with two striæ on each side; head densely punctured. Prothorax closely and coarsely punctured, wider than long, narrowed in front, and broadly rounded on the sides, feebly constricted near the tip. Scutellum densely pubescent. Elytra at base one-half wider than the prothorax, oblong, striæ distant, not deep, coarsely punctured, interspaces feebly punctulate, shining; pubescence condensed so as to make a pattern of bands curving forwards and outwards, the spaces near the bands being nearly glabrous. Thighs strongly toothed, the front ones with a distinct acute cusp on the distal edge of the tooth; front tibiæ sinuate. Antennæ with the first joint of the funiculus equal to the three following; second equal to the two following united. Length 4 mm.; .15 inch.

Illinois and Missouri; three specimens. The pattern of the elytra is somewhat complex, and varies with denudation, but the other characters are quite sufficient to enable the species to be easily recognized.

3. **A. fulvus** Lec., Pr. Ac. Nat. Sc. Phila. 1858, 79.

Texas. A large species easily recognized by the shining fulvous color, very coarse punctures of the thorax, which has a narrow dorsal line of pubescence, and the pattern of narrow lines of pubescence behind the middle of the elytra. The striæ are scarcely impressed, distant and very coarsely punctured. The antennæ are as in the preceding, but the teeth of the front thighs are longer and separate.

4. **A. gularis**, n. sp.

Elongate, oblong, black, above with a few white hairs, head beneath, and sides of abdomen with dense white scales, beak finely punctulate, very obsoletely striate, head opaque, scarcely punctulate, with a small puncture between the eyes. Prothorax a little wider than long, rounded on the sides, narrowed in front of the middle, broadly constricted near the tip, convex strongly but not very closely punctured. Scutellum densely pubescent. Elytra about one-fourth wider than the prothorax, oblong, very dark red, with the suture blackish, striæ distant, well impressed, finely punctured, interspaces shining flat, nearly smooth. Antennæ ferruginous brown, joints as in the two preceding. Legs piceous, base of thighs, part of tibiæ and tarsi paler; thighs strongly toothed, front pair with a very small acute cusp beyond the base of the tooth, and separate from it. Length 3.5 mm.; .15 inch.

One specimen, Middle States. Resembles in form and appearance *A. suturalis*, but is much larger, and the antennæ and front thighs are quite different.

5. **A. profundus**, n. sp.

Ovate, ferruginous, not shining, thinly and very finely pubescent; beak punctured and striate, head sparsely, distinctly punctured, with an impressed frontal line. Prothorax as long as wide, sides nearly straight behind, then rounded and narrowed in front of the middle, broadly constricted near the tip, convex, coarsely and tolerably densely punctured. Elytra with deep and wide punctured striæ, interspaces convex, finely rugose and punctulate. Antennæ as in the preceding species, with the second joint of the funiculus as long as the two following. Thighs acutely toothed, the front pair without accessory cusp. Length 3 mm.; .12 inch.

Illinois, two specimens. Larger and more robust than *A. sycophanta*, and easily known by the deep elytral striæ.

6. **A. ater**, n. sp.

Oblong, ovate, black, thinly pubescent above. clothed with white scales on the prothorax and beneath; beak long, slender, shining, sparsely punctured; head punctured, frontal line long and fine. Prothorax wider than long, narrowed in front from the base, sides broadly rounded, feebly constricted near the tip, closely punctured, punctures bearing white scales, which become larger and less sparse towards the sides. Scutellum white, pubescent. Elytra one third wider than the prothorax at the base, convex, striæ strongly impressed, punctured, interspaces slightly convex, rather shining, feebly rugulose. Antennæ piceous, scape and base of funiculus paler, second joint of latter equal to third and fourth united. Thighs armed with a small acute tooth, tibiæ and tarsi piceous. Length 4.5 mm.; .175 inch.

Geysers, California; Mr. Crotch.

7. **A. brunnipennis** Mannh., Bull. Mosc. 1843, ii, 292.

One specimen found with the preceding. An oblong species, resembling *A. suturalis* in form and size, with the beak punctured and striate, the head punctured, the frontal line long; the prothorax is a little longer than wide, very coarsely and densely punctured; the elytral striæ punctured, distant, not much impressed, the interspaces flat, nearly smooth. The antennæ are testaceous with piceous club, second joint of funiculus equal to third and fourth united. Legs slender, thighs very feebly clavate, armed with a very small acute tooth, almost obsolete on the hind pair; tibiæ nearly straight. Body thinly pubescent, with some intermixed scales towards the sides and on the under surface.

8. **A. scutellatus** Gyll., Sch. Curc. iii, 342.

Massachusetts, Texas, Missouri. Of the same size as the next species, and widely distributed.

The color is black, with the antennæ and tarsi testaceous; the front thighs are armed with a very small tooth, and the others are entirely unarmed. The markings are composed of scales, and in well preserved specimens the sides of the prothorax and the trunk are also squamose; a small post scutellar line and another each side at the base, and an indistinct prothoracic dorsal line are also whitish. The elytral markings stop suddenly at the eighth striæ, along which the front margin of the curve is prolonged, thus giving an oblique outline. The color varies and the elytra and legs are sometimes dark brown. I am in doubt whether this species is properly identified with the one intended by Gyllenhal. If the latter be not the one here described, it is probably nothing more than a dark variety of the next species, *A. subguttatus*, described below, also agrees moderately well, but the elytra are not piceous and the beak is not striate. If on examining the original type of *scutellatus* it is found that this species is distinct, it may be called *variegatus*.

9. **A. signatus** Say, Curc. 25; ed. Lec. i, 293; Gyll., Sch. Curc. iii, 348; Boh., ibid. vii, 2nd, 221, var. *A. bisignatus* Gyll., ibid. iii, 344.

Massachusetts to Florida and Texas; the black spot usually extends from the side two-thirds way to the suture, upon which in the best marked specimens, there is also a small dark spot; but it is frequently much smaller, extending only from the third to the sixth stria; the pubescence is denser at the margin of the spot which is thus surrounded with a hairy band. The thighs are all armed with an acute tooth. The second joint of the funiculus of the antennæ is perceptibly longer than the third, but not so much so as in the preceding species. It therefore forms a passage to the small species which compose the next group.

10. **A. rubidus**, n. sp.

Testaceous, uniformly clothed above and beneath with fine ochreous pubescence; beak punctured and striate, head sparsely punctured; prothorax wider than long, densely but not coarsely punctured, narrowed from the base, sides broadly rounded in front, feebly constricted near the tip, pubescence more condensed on the median line. Elytra one-third wider than the prothorax, oblong, striæ deep, moderately punctured, interspaces convex punctulate, scuttellar region somewhat dark, scuttellum white-pubescent. Thighs armed with an acute tooth; front tibiæ curved at base, sinuate on the inner side. Length 2.2 mm.; .09 inch.

One specimen, Pennsylvania; Dr. Melsheimer. Though agreeing in some characters, this species must be quite different from *A. helvolus* Boh. Sch. Curc. vii, 2,224, which is unknown to me.

11. **A. juniperinus.** *Erirhinus junip.* Sanborn, Proc. Bost. Soc. Nat. Hist., xii, 81.

Massachusetts, in Podysoma, a parasitic fungus on Juniper. A small pubescent pale species, easily known by the fuscous narrow curved band behind the middle of the elytra; the beak is punctured and striate as far as the middle, front channeled, prothorax densely not coarsely punctured;

elytra with impressed punctured striæ, interspaces nearly flat, shining, sparsely punctulate. Thighs with a very small tooth, front tibiæ straight, scarcely sinuate on the inner margin.

12. A. **sycophanta** Walsh, Proc. Ent. Soc. Phila., vi, 265.

Western States, Illinois; Mr. Walsh. Breeds in galls on willow trees. This species is easily known by the interspaces of the elytra rather flat, and nearly opaque; the punctures of the prothorax are very coarse and crowded. The pubescence is hairy above, but coarser and almost scale-like beneath, the beak is punctured and striate; the thighs are all armed with a tooth, and the front tibiæ are nearly straight. The color varies, but the elytra are always red, though sometimes darker near the scutellum.

I am disposed to believe this is *A. hæmatopus* Boh. Sch. Curc., vii, 2, 222, with the description of which it agrees in all particulars, except that the prothorax is not "*rugoso granulato,*" a style of sculpture very unlikely to occur in the genus, but which may be a vague method of indicating the very coarse deep punctures with narrow high intervals which characterize this species.

13. A. **rufipennis**, n. sp.

Oblong, blackish, thinly but finely pubescent with white hair. Beak striate and punctured, head sparsely punctulate, front foveate; prothorax a little longer than wide, narrowed in front and broadly rounded on the sides, feebly constricted as usual, surface densely and coarsely punctured, though less so than in the preceding species; elytra oblong, humeri less prominent than usual, and rather oblique, striæ well impressed, coarsely punctured, interspaces slightly convex, shining, sparsely punctulate, ferruginous, suture darker, scutellum clothed with white hairs. Antennæ and legs ferruginous, thighs strongly toothed, front tibiæ straight, slightly sinuate on inner side. Length 2.2 mm., .09 inch.

One specimen, Pennsylvania. Of the same form and size as the preceding, but easily known by the less coarse punctures of the prothorax, and the smoother and shining elytral interspaces; the humeri are less prominent than in our other species.

14. A. **suturalis** Lec., Ann. Lyc. Nat. Hist. N. York, i, 171, pl. xi, f. 9; Gyll., Sch. Curc. iii, 346; Boh., ibid. vii, 2, 223 (cum var.); *A. erythropterus* Say, Curc. 25; ed. Lec. i, 293.

Middle, Southern, and Western States. Varies in color and extent of the red elytral spot, which is sometimes bright yellowish-red, and distinctly limited, sometimes dark and diffused, so that only the suture remains blackish. In one specimen the surface of the elytra is dull and finely rugose, but I suspect that this has been caused by some injury received in the early stages of development, and must be regarded as an accidental monstrosity, and not as a variation.

15. A. **musculus** Say, Curc. 15; ed. Lec. i, 277; Gyll. Sch. Curc. iii, 350.

Middle, Southern, and Western States. Closely allied to the varieties of the preceding in which the red is diffused over the elytra; but smaller and more robust, with the beak more slender, and the funicle of the antennæ with the outer joints more rounded; I can find no other differences worth mentioning, and it will very probably be found to be not distinct.

16. A. **sulcifrons**, n. sp.

Black, with rather dull lustre, thinly pubescent above, more densely beneath. Beak strongly punctured, striate at base, head sparsely punctulate, with a deeply marked frontal stria. Prothorax wider than long, gradually narrowed from the base, feebly rounded on the sides, deeply and densely punctured. Elytra one-third wider than the prothorax, slightly ovate, striæ deep, coarsely punctured, interspaces convex, nearly smooth; behind the middle are two series of small spots of pubescence, as in well preserved specimens of the preceding three species. Antennæ piceo-testaceous; thighs scarcely clavate, with a very small tooth scarcely visible on the middle and hind pair. Length 1.6 mm.; .065 inch.

One specimen, Georgia. Also related to the two preceding, but readily known by the entirely black color, and sulcate front.

17. A. **flavicornis** Boh., Sch. Curc. vii, 2, 231.

Maryland to Texas. The beak is sparsely punctured, finely striate, head nearly smooth, front channeled, prothorax moderately densely punctured, and elytral striæ fine, distant, and finely punctured. The pubescence is white, coarse, and thinly distributed, a little more dense beneath. The antennæ are yellow-testaceous, and the tarsi piceous. All the thighs armed with a small acute tooth. The scutellum and a small intra-humeral spot are densely pubescent.

18. A. **morulus**, n. sp.

California, San Mateo and Gilroy; Mr. Crotch.

A small black species of the same size and general form (2.2 mm.; .09 inch), as the preceding, but with the beak longer and more punctured, the head distinctly punctured, the frontal stria shorter. The prothorax is equally strongly punctured, but more rounded on the sides. The elytral striæ are well impressed, strongly and closely punctured, and the interspaces flat and rugose. The pubescence is very fine and sparse, a little more distinct beneath. The antennæ are dark-testaceous with the club piceous; the thighs are scarcely clavate, and hardly perceptibly toothed.

19. A. **nigrinus** Boh., Sch. Curc. vii, 2, 230.

Georgia and Louisiana; three specimens. Of the same size and general form, and as finely pubescent as the last species. The prothorax is very coarsely punctured, and the elytral striæ are less impressed, but more coarsely punctured, and the interspaces less flat, and nearly smooth. The antennæ are nearly black, the thighs are armed with a very minute tooth, more distinct on the front pair.

20. A. **corvulus**, n. sp.

Black, slightly pruinose with sparse white pubescence. Beak punctured and feebly striate, head opaque, with a small frontal fovea. Prothorax closely but less coarsely punctured than in the preceding, wider than long, narrowed in front and feebly rounded on the sides. Elytra sub-ovate, striæ strongly punctured, not much impressed, interspaces shining nearly smooth. Antennæ piceous, base testaceous; thighs slightly clavate, armed with a very small tooth. Length 1.5–2 mm.; .06-.08 inch.

Atlantic slope, extending to Oregon. Easily known by the small size, and which at first sight causes it to resemble an apion.

21. A. **pusillus**, n. sp.

Testaceous, thinly sprinkled with white scale-like hairs. Beak long and slender, sparsely and finely punctured, head with a small frontal puncture. Prothorax wider than long, rounded on the sides, coarsely and deeply punctured. Elytra sub-ovate, less elongate than usual, striæ coarsely punctured, interspaces nearly smooth, slightly convex. Legs rather stout, thighs acutely toothed. Length 1.4 mm.; .05 inch.

One specimen, Texas; Belfrage. A robust species easily known by the small size and the characters above given.

22. A. **elegans**, n. sp.

Rather broadly ovate, brown, clothed with very small depressed scales of a brown and gray color, with the scutellum and neighboring elytral spot snow white. Beak slender, straight, as long as the head and prothorax, shining, punctured, striate for two-thirds the length; head punctured, front narrow, channeled; eyes larger and more prominent than usual. Prothorax as wide as long, gradually narrowed and slightly rounded on the sides from the base, densely punctured, marked with a narrow transverse and longitudinal line of white scales forming a cross; at the middle of the base some scattered white scales; near the apex two spots of silky yellow-brown scales, and a similar larger spot on the inflexed sides. Elytra wider than the prothorax, nearly truncate at base, humeri prominent rounded; striæ punctured, obscured by the scales which form a beautiful complex pattern of brown, dark-brown, and gray. Beneath mottled with gray scales, legs stout, thighs thick and strongly toothed, tibiæ with an obtuse angle on the inner side at one-third the length; claws cleft as usual. Antennæ testaceous brown, funicle slender with the first joint long, second a little longer than the third; club almost articulated. Length 2 mm.; .08 inch.

Two males, Haulover, Florida, March 10th; Schwarz and Hubbard. The pygidium is perpendicular, and even slightly inflexed. The large convex eyes, the narrow front, and tibiæ armed with a tooth on the inner side, easily distinguish this beautiful species. The prosternum is extremely short, more so, in fact, than in any other species known to me.

23. A. **squamosus**, n. sp.

Brown, densely clothed with scale-like gray pubescence; beak naked, red-brown, shining, finely punctured, not striate, frontal fovea elongate; prothorax broader than long, narrowed in front, rounded on the sides, densely punctured. Elytra suddenly one-third wider than the prothorax, not elongate, striæ impressed, punctured, interspaces quite flat. Antennæ ferruginous, slender, second joint of funiculus longer than third; legs ferruginous, thighs clavate, armed with an acute tooth. Length 4.4 mm.; .17 inch.

Colorado; not rare. In some specimens three thoracic vittæ and the alternate interspaces of the elytra are paler; the scutellum is nearly white.

24. A. **tectus**, n. sp.

Blackish, less densely clothed with yellowish or whitish scales, beak slightly pubescent, coarsely punctured and striate, frontal fovea elongate. Prothorax wider than long, narrowed in front, broadly rounded on the sides, densely punctured. Elytra wider than the prothorax at base, striæ coarsely punctured, interspaces flat, fourth covered with paler scales from the base to behind the middle; sixth from the base nearly to the middle. Antennæ brown, scape and base of funiculus ferruginous; second joint of funiculus scarcely longer than third. Legs ferruginous, thighs armed with a small acute spine. Length 2.4 mm.; .10 inch.

Massachusetts; Georgia.

25. A. **hirtus**, n. sp.

Elongate, black, densely clothed with coarse scarcely squamiform ochreous pubescence. Beak slightly pubescent, punctured obsoletely striate at base. Prothorax not wider than long, gradually narrowed in front, broadly rounded on the sides, densely punctured. Elytra elongate oblong, wider than the prothorax at base, striæ punctured, interspaces flat, antennæ and legs ferruginous, club and thighs darker, the latter clavate armed with a scarcely perceptible tooth; second joint of funicles scarcely longer than third. Length 3.2 mm.; .13 inch.

One specimen, Utah.

26. A. **inermis** Boh., Eugenies Resa, Coleopt. 131.

Elongate, ferruginous, very densely clothed with large whitish scales, beak naked except at base; punctured, and feebly striate. Prothorax densely and deeply punctured, a little wider than long, narrowed in front and rounded on the sides. Elytra a little wider than the prothorax at base, elongate oblong, striæ strongly punctured, interspaces moderately convex, nearly smooth, club of antennæ darker, second joint of funicle scarcely longer than third; thighs feebly clavate, not toothed. Length 2.2 mm.; .09 inch.

Mariposa, California; Dr. Thevenet.

27. A. **subvittatus**, n. sp.

Of the same form as the preceding, but a little larger, and darker in color; the scales are smaller, though equally dense; the prothorax has three white vittæ, with two intermediate brownish ones; the elytra are mingled brown and white, with a posterior stripe on the third interspace, and one on the fifth extending from the base to the middle pale; the scutellum as usual is pale. The front thighs are almost imperceptibly toothed. Length 2.5 mm.; .10 inch.

San Diego and Mariposa, California; five specimens.

28. **A. pauperculus**, n. sp.

Also of the same form as *A. inermis* and densely covered with broad scales of dirty white, mixed with pale brown; other characters as in that species, except that the front thighs are armed beneath with a distinct, though not very prominent tooth. Length 2 mm.; .08 inch.

San Diego, Cala.; five specimens.

29. **A. disjunctus**. n. sp.

Subovate, brown, covered beneath with pale, above with brown scales; beak long, punctured and striate, head feebly punctured, frontal fovea elongate. Prothorax wider than long, gradually narrowed in front from the base, slightly rounded on the sides, deeply and densely punctured, with three dorsal vittæ of pale scales. Elytra at base not wider than the prothorax, gradually wider and slightly rounded on the sides, striæ punctured, interspaces slightly convex, fourth for the middle, third and sixth from base to middle covered with pale scales. Antennæ testaceous at base, second joint of funiculus as long as the two following. Thighs clavate, armed with a small tooth, which seems to be wanting on the hind pair. Length 3.2 mm.; .125.

Georgia and Illinois; two specimens. The outer interspaces of the elytra behind the middle, and the scutellum are also covered with pale scales. The teeth of the tarsal claws are more approximate than in any of the preceding species, and seem to be almost connate.

30. **A. rufipes**, n. sp.

Subovate piceous, less densely clothed with white scales, beak long, punctured and striate, head punctured, frontal fovea small. Prothorax as in the preceding. Elytra not wider at base than the prothorax, gradually wider and slightly rounded on the sides; striæ strongly punctured, interspaces flat, antennæ and legs ferruginous, second joint of funiculus hardly longer than the third, thighs clavate, armed with an acute tooth, which is smaller on the hind pair but quite distinct. Length 2.6 mm.; .10 inch.

New York, one specimen.

31. **A. elongatus**, n. sp.

Elongate, dark brown, partly clothed with small gray scales, forming an indistinct pattern on the elytra. Beak longer than the head and prothorax, slender, cylindrical, curved, densely punctured, and finely carinate; head punctured, vertex channeled, front scarcely as wide as usual. Prothorax strongly and densely punctured, wider than long, nearly truncate at base, gradually narrowed from the base and slightly rounded on the sides; white scales more dense each side at the base, forming an ill-defined spot. Elytra a little wider than the base of the prothorax, elongate, oval; striæ fine, punctured; interspaces not convex, finely alutaceous. Thighs feebly clavate, not toothed; front and middle tibiæ slightly sinuate; claws cleft as usual. Antennæ testaceous, club dusky; first joint of funicle as long as the second and third united. Length 2.3 mm.; .09 inch.

Georgia; two specimens. Resembles in form certain species of *Smicro-*

nyx. In this species as in *A. inermis, subvittatus,* and *pauperculus,* the pygidium is entirely covered by the elytra, and the fifth ventral is longer than in the other species. In a revision of this group they may indicate a distinct genus.

Division C. Funiculus of antennæ 6-jointed.

32. **A. crataegi** Walsh, Proc. Ent. Soc. Phila. vi, 266.

Middle, Western, and Southern States, to Texas.

An elongate uniformly ferruginous species, with dull lustre, and pubescent with yellowish hairs, which are condensed on the median line of the prothorax forming a dorsal vitta. The beak is punctured, and the front channeled; the prothorax densely punctured; the elytra deeply striate, with the interspaces convex. The funiculus of the antennæ is 6-jointed, and slender, second joint a little longer than third; thighs armed with an acute tooth; front tibiæ nearly straight. The size and form is as in *A. sycophanta,* and like that species, it is parasitic in galls; in this instance, however, upon *Crataegus,* and in the other upon *Salix.* Length 2.3 mm.; .09 inch.

33. **A. subfasciatus,** n. sp.

Reddish-brown, rather robust, finely and thinly pubescent; beak opaque, not distinctly punctured; prothorax strongly punctured, elytra with the striæ coarsely punctured, interspaces nearly smooth; behind the middle is a broad transverse denuded band, at the margins of which the pubescence is more condensed. Antennæ more robust than in the preceding, funiculus 6-jointed, second joint not longer than the third. Thighs with a small acute tooth. Length 1.5 mm.; .06 inch.

One specimen, New York. Greatly resembles what I have above considered as *A. musculus,* but is much smaller, and differs by the 6-jointed funiculus of the antennæ.

34. **A. robustulus,** n. sp.

Robust, black, clothed with ashy scales. Beak punctured and feebly striate. Prothorax much wider than long, narrowed in front, rounded on the sides, closely and deeply punctured. Elytra one-third wider than the prothorax, striæ coarsely punctured towards the base, interspaces flat. Antennæ and feet brown, thighs not toothed, funiculus 6-jointed, second and third joints equal, or nearly so. Length 1.5 mm.; .06 inch.

Kansas; three specimens.

35. **A. nubilus,** n. sp.

Rusty brown, rather elongate, sparsely and finely pubescent, with intermixed scattered pale-yellowish scales. Beak finely punctured, obsoletely striate, frontal fovea feeble. Prothorax wider than long, narrowed in front and rounded on the sides, strongly punctured, with a short whitish dorsal line behind the middle. Elytra with the striæ very coarsely punctured, interspaces slightly rugose; the scales are irregularly scattered, so as to give the appearance of a large denuded dorsal space, and a posterior denuded band oblique inwards and backwards. Antennæ with the funiculus stout, 6-jointed, second joint not elongated, club fuscous, of the usual form. Legs rather stout, thighs not toothed; claws very feebly toothed at base. Length 1.6 mm.; .07 inch.

One specimen, North Carolina; Dr. Zimmerman. The nearly simple ungues distinguish this readily from all other species in our fauna, except the next, and might lead, on superficial view to its being placed in the *Erirhine* tribe, from which it essentially differs by the antennal club, and by the ventral segments being nearly equal in length.

36. A. **ungularis**, n. sp.

Elongate, dark brown, thinly clothed with pubescence, and with a faint appearance of a transverse denuded band behind the middle of the elytra. Beak indistinctly punctured, obsoletely striate, head opaque, frontal fovea small, distinct. Prothorax wider than long, rounded on the sides, narrowed in front of the middle, densely punctured Elytra one-fourth wider than the prothorax, oblong, striæ coarsely punctured, interspaces nearly smooth; pubescence more dense on the scutellum, a small humeral spot, and two very indistinct posterior narrow bands, which tend to unite at the suture. Sides of meso- and metathorax densely pubescent. Antennæ and legs ferruginous, funiculus 6-jointed, second joint elongate; thighs not toothed, claws with a short acute basal tooth, slightly connected at base. Length 2.3 mm.; .09 inch.

Southern States; Dr. Zimmermann.

37. A. **mixtus**, n. sp.

Elongate-ovate, yellow-brown; pubescence white, coarse, scattered, condensed on the elytra, into several indefinite bands; beak punctured and strongly striate. Prothorax smaller than usual, wider than long, gradually narrowed in front, slightly rounded on the sides, coarsely punctured. Scutellum white-pubescent. Elytra at base but little wider than the prothorax, gradually wider, elongate-ovate, brown, with the humeri and a common sutural rounded spot behind the middle, yellow-brown; two narrow indistinct transverse bands of pubescence before the middle, and others behind the middle; striæ strongly punctured, interspaces slightly convex, nearly smooth. Antennæ with funiculus 6-jointed, second and third joints equal; thighs scarcely clavate, acutely toothed; claws divergent, armed with a short basal tooth, which is rounded at tip. Length 2.3 –3 mm.; .09–.12 inch.

Illinois, Walsh; Texas, Belfrage. On account of the comparatively smaller size of the prothorax, this insect has some resemblance in form to *Orchestes*, but the eyes are of the usual size in the present genus, widely separated, and the hind legs are not thicker. The elytra are not rounded on the sides behind the humeri, though gradually wider as far as the middle.

38. A. **decipiens**, n. sp.

Rather elongate, brown, densely clothed with large gray scales; prothorax indistinctly striped; elytra with a darker lateral cloud behind the middle. Beak slender, curved, longer than the head and prothorax, naked, punctured, substriate near the base; head punctured, clothed with fine scales. Prothorax one-third wider than long, narrowed from the base, rounded on the sides, densely punctured. Elytra a little wider than the prothorax; sides parallel, then obliquely narrowed and rounded to the tips, which entirely cover the pygidium; striæ strongly punctured, interspaces nearly flat. Legs testaceous, front thighs toothed, hind thighs not toothed; claws toothed, with the teeth nearly connate; antennæ testaceous, funicle 6-jointed, first joint elongate, second joint nearly as long, but thinner. Length 2 mm.; .08 inch.

Texas, Belfrage; one specimen. Has quite the appearance of a *Smicronyx*. The last ventral segment is a little longer than the fourth, and is marked with a large shallow rounded impression. There are some white markings upon the elytra of which a narrow scutellar spot and a line upon the sixth interspace from the base to the middle are most obvious.

39. **A. canus**, n. sp.

Elongate, brown, or blackish-brown, densely clothed with large grayish-white scales; in every respect like the preceding, except that the scales are entirely uniform in color. Length 2 mm.; .08 inch.

Texas, Belfrage; four specimens. The pygidium of the ♂ is convex perpendicular, and indeed, slightly inflexed; the fifth ventral is a little longer than the fourth, and not impressed in either sex; the pygidium of the ♀ is but slightly visible between the tips of the elytra.

40. **A. affinis**, n. sp.

This species also resembles in form and sculpture the preceding two species. The color is nearly black, clothed with pale gray scales of uniform color. The legs and antennæ testaceous, front thighs toothed, hind thighs simple; claws toothed as in the preceding. Antennæ with 6-jointed funicle, second joint shorter than first, and equal to the third. Length 2 mm.; .08 inch.

Texas, Belfrage; three females. The pygidium in two specimens is barely visible, and in the third is completely covered by the elytra.

41. **A. nanus**, n. sp.

Also similar to the three preceding species but much smaller and narrower, nearly black, clothed with large gray scales. Prothorax very little wider than long, less narrowed in front, less rounded on the sides. Elytra very little wider than the prothorax. Antennæ brown, funicle 6-jointed, with the second joint equal to the third, and united equal to the first. Legs brown, thighs not toothed. Length 1.5 mm.; .06 inch.

Texas, Belfrage; two specimens. The pygidium is slightly exposed, and in the ♀ the last ventral is impressed with a shallow round fovea. The claws are toothed as in the three preceding species.

ORCHESTES Illiger.

This genus is closely allied to *Anthonomus*, and like it has the ventral sutures straight and deeply marked, and the last segment not longer than the preceding. It differs by the eyes being large, approximate above, so as to narrow the front, and by the hind thighs being thickened, so as to become saltatorial. The claws are appendiculate in our species.

As in *Anthonomus*, the funicle of the antennæ is 6-jointed in some, 7-jointed in other species.

An excellent analytical table with full descriptions of our species, of which but four were known, has been published by Dr. Horn, in Proc. Amer. Phil. Soc. Nov. 1873, p. 461. To the species described by him must be added the following :

1. **O. rufipes**, n. sp.

Black, very thinly pubescent, with fine whitish hairs ; beak finely punctured, head punctured, front narrow, but distinct; prothorax finely punctured; elytra oval, rather flattened, deeply striate, interspaces rugosely punctulate. Antennæ and legs yellow, hind thighs dusky, very slightly incrassated; funicle 6-jointed, second joint scarcely longer than the third; thighs not toothed; claws broadly appendiculate. Length 2 mm.; .08 inch.

Vermont; two specimens. Smaller than *O. pallicornis*, with the eyes less approximate, the hind thighs scarcely thickened, and the legs not black, but ferruginous-yellow.

2. **O. puberulus** Boh., Eugen. Resa. Ins., 133.

California, one specimen. Larger than the other species; black, rather densely clothed with coarse brown pubescence. Prothorax at base twice as wide as the head, not wider than long, narrowed from the base to the tip, punctured. Elytra elongate-oval, nearly twice as wide as the prothorax; humeri regularly rounded, not prominent; striæ composed of rather large, deep but not very close punctures. Antennæ testaceous, funicle 6-jointed, joints 1–3 elongate; legs testaceous, thighs not toothed; claws broadly appendiculate. Length 3.3 mm.; .13 inch.

3. **O. parvicollis**, n. sp.

Black, thinly clothed with very fine pubescence, which is not very obvious, except upon the scutellum. Prothorax at base a little wider than long, narrowed in front, sides nearly straight; surface densely and strongly punctured. Elytra elongate-oval, more than one-half wider than the prothorax; striæ deep, punctured, interspaces finely rugose. Antennæ and legs black; funicle 7-jointed; thighs not toothed; claws broadly appendiculate. Length 2.8 mm.; .11 inch.

San Mateo, California; one specimen. Resembles *O. niger*, Horn, but is larger, with the scutellum less densely pubescent; the prothorax less coarsely punctured, and the elytra comparatively longer and more regularly oval.

MACRORHOPTUS Lec.

This new genus is established upon a species from Texas and California, having the aspect somewhat of a small *Magdalis*, but with the hind angles of the prothorax not laminate, and of the usual obtuse form. It is remarkable for the short thick 6-jointed funiculus, the joints 2–6 being closely connected, gradually wider, and uniting with the annulated club so as to form a regular club shaped outline. The beak is cylindrical, rather stout, about as long as the prothorax; antennæ inserted one-fourth from the end; eyes large, transversely oval; front narrower than the beak. Prothorax wider than long, narrowed in front, broadly rounded on the sides; prosternum short, emarginate in front. Elytra elongate, wider than prothorax; humeral angles rounded, sides parallel, striæ obsolete. Ventral segments nearly equal, third and fourth very little shorter, sutures straight, less deeply impressed than in *Anthonomus*. Legs rather short, front thighs armed with a large tooth, other thighs unarmed, sub-clavate; tibiæ straight, obliquely truncate, without terminal hook; claws with a slender tooth, as in most *Anthonomus*.

1. **M. estriatus**, n. sp.

Elongate, black, not very densely covered with elongate cinereous scales; beak densely finely punctured, separated from the front by a feeble transverse impression; head punctured; prothorax more deeply and coarsely punctured; elytra densely punctured, with slight traces of striæ near the margin and tip; front thighs strongly toothed; antennæ brown, with verticellate rows of white scales. Length 2.7 mm.; .10 inch.

Texas, Belfrage; Santa Barbara and Warner's Ranch, California, Crotch.

When the scales are rubbed off a fine inconspicuous pubescence remains. The emargination of the prosternum gives an appearance of feeble postocular lobes, and in following Lacordaire's arrangement this genus would be placed in the *Ceratopides*, after *Acanthobrachium*, from which it seems to differ by having only the front thighs toothed.

ALYCA n. g.

I have separated as a distinct genus *Erirhinus ephippiatus* Say, which differs from the other genera of this group by having the last ventral segment as long as the two preceding, and the claws divergent and broadly appendiculate. The beak is not very slender, cylindrical, as long as the prothorax; the antennæ are inserted about one-fourth from the end; the scape attains the eyes, which are rounded, moderate in size, and distant; funiculus 7-jointed, first joint stouter and longer, the others equal, gradually a little wider, the outer ones rounded; club elongate-oval, annulated. Prothorax wider than long, narrowed in front of the middle, rounded on the sides, feebly constricted near the tip. Elytra wider than prothorax, oblong-elongate, humeri rounded, sides parallel, striæ punctured, interspaces nearly flat. Prosternum short in front of the coxæ. Ventral sutures straight, third and fourth segments united equal to each of the others, fifth flat, with a very small apical carina in one sex. Legs moderate, thighs feebly clavate, not toothed, tibiæ with a distinct terminal hook, tarsi dilated, third joint very broad, bilobed; claws divergent, with a broad rectangular tooth or appendiculum.

1. **A. ephippiata.** *Erirhinus ephipp.*, Say, Curc. 25; ed. Lec. i, 293; Gyll. Sch. Curc. iii, 289; Walsh, Proc. Ent. Soc. Phil. vi, 268.

Atlantic slope; found also by Mr. Crotch at San Diego and San Bernardino, California.

A small yellowish-brown insect, densely clothed with yellow pubescence, with a large dark spot near the base and another transverse one behind the middle, connected by a sutural stripe; sometimes there is an appearance of a third spot near the tip of the elytra.

This insect might be easily confounded with some of the varieties of *Phyllotrox nubifer*, but the elytra are less broadly rounded at tip, and the claws are not simple, but broadly appendiculate. It varies greatly in size, 1.8–2.9 mm.; .07–.11 inch. Bred by Mr. Walsh from a *Cecidomyidous* gall; *S. brassicoides* of *Salix longifolia*.

Tribe X. PRIONOMERINI.

This tribe contains a few small species of robust form, easily known by the following assemblage of characters:

Beak stout, sometimes short and flat: antennæ inserted about the middle, scape extending upon the eyes which are large and rounded; funicle 7-jointed, club very large, pubescent, oval pointed, almost articulated. Prothorax without postocular lobes, front coxæ contiguous; prosternum short, not emarginate.

Ventral sutures deeply impressed; the first is straight, the others strongly angulated at the sides; fifth segment scarcely longer than the fourth. Legs stout, tibiæ with a slender terminal hook; tarsi dilated, spongy beneath; third joint bilobed, claws appendiculate. Pygidium more or less visible.

Beak as long as prothorax. sub-cylindrical; long; front thighs with a large serrated tooth	**Prionomerus.**
Beak short, broad and flat; thighs with a small acute tooth......	**Piazorhinus.**

PRIONOMERUS Sch.

1. **P. calceatus.** *Anthonomus* (*Odontopus* †) *calc.* Say, Curc. 15; ed. Lec. i, 278; *Prion. carbonarius* Gyll., Sch. Curc. iii, 360.

Atlantic States. I do not know why Gyllenhal has suppressed the specific name proposed by Say, in favor of one taken from Dejean's Catalogue. It is unfortunate that the generic name given by Say was not accompanied with a proper description, as it would then (1831) have had precedence over the homonyms of Silbermann in *Coleoptera*, and Laporte in *Hemiptera*.

PIAZORHINUS Sch.

1. **P. scutellaris** Gyll., Sch. Curc. iii, 472; *Attelabus scut.* Say, Journ. Ac. Nat. Sc. Phil. v, 252; ed. Lec. ii, 315.

Atlantic States. The antennæ are scarcely geniculate, and being inserted nearer the eyes in consequence of the shortness of the beak, the scape is less elongated than in the preceding genus. I observe in my specimens that the thighs are armed with a small but acute tooth about the middle on the under side; this tooth has been overlooked by Schönherr, while Lacordaire describes the thighs as unarmed.

2. **P. pictus**, n. sp.

Testaceous, clothed with pale-yellowish pubescence; head and beak dusky. Elytra with a large rounded common dusky spot extending from the base to the middle, paler within; and a dusky oblique band, more or less interrupted on the seventh interspace, which attains the suture about one-fourth from the tip; striæ punctured, less deep than in *P. scutellaris*. Thighs armed with a small acute tooth; claws appendiculate. Length 2.5 mm.; .10 inch.

Georgia; one specimen. The large common spot of the elytra is dark only at the edge, in the middle it is nearly as pale as the ground color. A manuscript drawing by my father named *Arhynchus tomentosus* † Dej. Cat. resembles this species.

Tribe XI. **TYCHIINI.**

In this tribe a form of body is resumed, which resembles that of the *Erirhinini*. The claws, however, are not simple, but appendiculate or toothed, and the second, third and fourth ventral sutures are not straight, but strongly angulated at the sides. The prolongation backwards of the side angles of the second segment is in some genera carried to such an extent that the points reach the fourth segment, and the sides of the third segment are thus entirely covered. The pygidium is usually exposed, by the tips of the elytra being separately rounded, but in *Tychius* they are conjointly rounded, and the pygidium is covered. This character, as in *Anthonomini*, possesses, therefore, but little value. The ventral segments are less unequal than in *Erirhinini*.

The other characters are those common to the preceding tribes; Beak long and usually slender; antennæ inserted far from the tip; antennal grooves directed sometimes against the eyes, sometimes below them. The eyes are rounded or nearly so, not finely granulated. The funicle of the antennæ is 6- or 7-jointed, and the club entirely pubescent and annulated. The prothorax has no postocular lobes; the prosternum is short, not strongly emarginate in front, and the coxæ are contiguous. The side pieces of the mesothorax are diagonally divided, and the epimera do not largely attain the base of the prothorax. The metasternum is long, and the side pieces are narrow, or moderately wide, dilated in front. Tibiæ feebly or strongly mucronate; articular surface prolonged on the outer face, so as to become oblique.

Our genera with three exceptions have not been described:

Angles of second ventral segment not extending to the fourth...... 2.
Angles of second ventral segment extending to the fourth.......... 5.
2. Claws broadly appendiculate.. 3.
" toothed... 4.

3. Beak stout; venter of ♂ with acute processes	PROCTORUS.
" slender; " " unarmed.	ENCALUS.
4. Beak slender; fourth ventral suture indistinct	THYSANOCNEMIS.
" stout carinate.	PLOCETES.
5. Elytra not tuberculate.	6.
" tuberculate.	TYLOPTERUS.
6. Tips of elytra conjointly rounded.	TYCHIUS.
" " separately "	7.
7. Claws toothed.	SIBYNES.
" simplex.	PARAGOGES.

PROCTORUS n. g.

This new genus is established upon a small insect which has altogether the form, sculpture, and mottled pubescence of *Erirhinus;* it is, however, easily known by the stouter beak, the curved ventral sutures, and the broadly appendiculate claws. The sexual characters of the ♂ are very remarkable; the fifth ventral, namely, is as long as the three preceding united; it is divided by a transverse sharply elevated ridge into two parts, of which the anterior is the larger and broadly concave; the hinder part is much more deeply concave, and on each side at the junction of the elevated ridge with the margin is a stout, flattened horn, rounded at the tip; on the anterior margin of the segment, at the middle, is a third shorter horn.

Beak as long as the prothorax, rather stout, cylindrical, somewhat curved, densely punctured, not striate nor carinate. Antennæ inserted about one-fourth from the tip (♀) or less (♂); scape slender, reaching the eyes, which are rounded and distant; funicle 7-jointed; first joint as long as the two following, and stouter; 2–7 short, equal, gradually a little wider; club moderate in size, elongate-oval, subacute, annulated; antennal grooves reaching the lower margin of the eyes. Prothorax about as wide as long, rounded on the sides in front, and feebly impressed near the tip. Elytra wider at base than prothorax, elongate oblong, humeri prominent, rounded, sides parallel; marginal stria incomplete at the middle. Ventral segments unequal; third and fourth together scarcely longer than each of the others; first suture straight at the sides, arched forwards at the middle; other sutures angulated at the sides. Legs rather short, thighs not toothed; tibiæ straight, the front pair with a small terminal hook; tarsi with the first joint slightly longer than the second, third broader bilobed; last joint as long as the first and second; claws divergent, broadly dilated and appendiculate at base.

1. P. armatus n. sp.

Black, thinly clothed with white hairy pubescence, which is somewhat mottled upon the elytra. Beak densely punctured. Prothorax closely and deeply punctured. Elytra with striæ strongly punctured, interspaces nearly flat, sparsely punctulate. Antennæ piceous. Length 3.4 mm.; .13 inch.

South side of Lake Superior; three specimens.

ENCALUS n. g.

This genus also resembles a small *Erirhinus*, and differs from *Proctorus* only by the beak being longer than the prothorax, and more slender; it is also punctured and feebly striate towards the base, as in many *Anthonomi*. The antennæ are inserted about one-fourth from the end of the beak; the scape almost reaches to the eyes, which are moderate in size and distant; the funiculus is 7-jointed, first joint longer, the others nearly equal, short, gradually wider and more rounded; club oval, annulated; ventral segments unequal, third and fourth together as long as second, fifth nearly as long; first suture straight; others angulated at the sides. Legs moderate, thighs armed with a small tooth; claws divergent, broadly appendiculate.

1. **E. decipiens** n. sp.

Black, clothed with white and yellowish pubescence. Prothorax not wider than long, broadly rounded on the sides, coarsely and very deeply punctured. Elytra wider than prothorax, at base elongate oblong, with a broad transverse black band occupying the middle third; striæ coarsely punctured, interspaces flat. Antennæ and legs piceo-ferruginous. Length 3.4 mm.; .13 inch.

Illinois and Minnesota; two specimens. In form and color this insect bears an almost deceptive resemblance to *Macrops solutus*, but in other characters it is in every way different.

PLOCETES n. g.

Beak rather stout, as long as the prothorax, carinate, punctured and with three fine elevated lines each side; antennal grooves deep, extending to the lower margin of the eyes, which are oval and rather large. Antennæ inserted about one-fourth from the tip, scape reaching nearly to the eyes; funicle 7-jointed, first joint as long as the three following united and stouter; second a little longer than third; 3–7 equal, scarcely increasing in width; club elongate-oval, annulated, rather large. Prothorax scarcely wider than long, rounded on the sides, narrowed in front of the middle, neither lobed nor constricted in front. Elytra one-half wider than prothorax, humeri oblique and rounded, disc not very convex, posterior callus rather prominent. Abdomen rather flattened; first ventral suture straight; the others distinctly angulated near the sides; third and fourth segments very little shorter than the first and second; fifth about one-half longer than fourth; pygidium covered. Legs rather stout, thighs clavate, with a very small tooth beneath, tibiæ broadly sinuate on the inner side; terminal hook distinct; tarsi with third joint bilobed, claws with a long, slender tooth, not bent inwards.

1. **P. ulmi** n. sp.

Black, clothed with small brown scaly hairs; beak carinate, striate and punctured, head punctured. Prothorax densely and deeply punctured, with a smooth, slightly elevated dorsal line. Elytra with a transverse band behind the middle, of white pubescence, which is longer and more dense near the suture; scutellum white; striæ composed of quadrate punctures, interspaces flat, densely rugose. Antennæ and legs dark reddish brown. Length 4 mm.; .15 inch.

Middle, Southern and Western States; Mr. C. V. Riley has given me a specimen, with the following note of habits: "On elm; makes a similar noise to the Plum Curculio, August 5th, 1874." Behind the white band the suture is velvety black, contrasting well with the diffused brown tint into which the band fades towards the tip of the elytra.

This curious insect is suggestive of a very small *Pissodes*, with which, however, it has no relations beyond the mere superficial resemblance in form and sculpture.

THYSANOCNEMIS n. g.

A singular genus somewhat resembling *Anthonomus* in appearance, but known at once by the front tibiæ of the ♂ being broader than usual, sinuate, and densely fringed on the inner side with long hair.

Beak longer than the prothorax, slender, moderately curved, cylindrical; eyes rather large, front narrow; antennæ inserted about one-fourth from the end of the beak, scape slender, reaching the eyes; funicle 7-jointed, first joint long and thicker, second a little longer than third; 3–7 nearly equal, scarcely increasing in width; club rather large, elongate-oval, very distinctly annulated. Prothorax wider than long, narrowed in front, and feebly constricted, broadly rounded on the sides. Elytra nearly one-half wider than the prothorax at base, oblong, slightly narrower from the humeri, which are prominent and rounded. Ventral segments unequal; first and second equal; third and fourth equal, but together a little longer than the second; fifth longer than third and fourth united; first suture straight, the others angulated at the sides; fourth suture nearly obliterated at the middle; pygidium partly exposed, perpendicular. Legs stout, thighs not toothed, tibiæ of ♂ thick, sinuate on the inner side, armed with a small terminal hook; front pair also with a long dense fringe of yellow hair on the inner margin; tibiæ of ♀ more slender, claws with a long tooth, which curves inwards, as in most species of *Anthonomus*.

1. T. **fraxini** n. sp.

Ferruginous, clothed with yellow hair. Beak finely punctured, obsoletely striate. Prothorax densely punctured. Elytra with punctured striæ, and slightly convex, nearly smooth interspaces; with a broad transverse band occupying the middle third, and dilated at the margin, less densely pubescent, and of a darker color. Length 3.7 mm.; .15 inch.

One male given me by Dr. Melsheimer, as found in York County, Pennsylvania; several females collected by Mr. Pettit on ash trees in Canada.

2. T. **helvolus** n. sp.

Brown, clothed with short sericeous yellowish brown hair; beak long, slender, much curved, nearly smooth; head opaque, punctured, front pubescent, not wider than the beak; eyes rather large. Prothorax twice as wide as long, much rounded on the sides, strongly punctured, sub-carinate.

Elytra one-fourth wider than the prothorax, oblong-elongate, humeri rounded, striæ impressed, interspaces nearly flat; third and fifth a little wider. Legs yellow; thighs unarmed; antennæ yellow, long and slender, funiculus 7-jointed, first and second joints elongate; club annulated, elongate-oval. Length 3.8 mm.; 1.5 inch.

Illinois; one female.

TYLOPTERUS n. g.

This genus is established upon two small species from Texas, clothed with remarkably dense sericeous pubescence, and having small tufts of hair and very prominent elytral callus. The beak is slender and curved; the eyes large; the front narrow (about one-third as wide as the beak). The antennæ are inserted about one-fourth from the end of the beak, slender; the scape reaches the eyes; funiculus 7-jointed, first joint as long as the two following; second joint a little longer than the third; club elongate-oval, annulated. Prothorax wider than long, narrowed in front, broadly rounded on the sides, convex. Elytra suddenly more than one-third wider than the prothorax, humeri prominent, elevated, rounded, sides converging a little behind; posterior callus very prominent. Ventral segments subequal, except the fifth, which is as long as the two preceding united; first ventral suture straight, others angulated at the sides, but the second more so than the third, so that the angles of the second segment project over the third nearly to the fourth segment. Pygidium of ♀ nearly covered by the elytra; anal segment of ♂ large, deflexed, and convex. Legs rather long, thighs clavate, not armed, front tibiæ longer, more slender, and slightly sinuate in ♂; terminal hook very small; claws with a large tooth near the tip.

1. **T. pallidus**, n. sp.

Densely clothed with pale ashy hair, with golden reflexions, which conceals the sculpture; front channeled. Elytra with the posterior callus in the form of a large obtuse tubercle, causing the declivity to appear broadly concave; marked with two irregular transverse bands of brown hair, the posterior one in front of the callus, and narrowed at the suture; the front one commencing at the middle on the sides, and running obliquely backwards to the suture, where there is a narrow tuft of black hair occupying the first interspace for one-seventh of its length; small pencils of black hair are also seen on the third, fifth and seventh interspaces where the bands cross them; there is also a little tuft on the third interspace near the base. Antennæ and legs ferruginous yellow. Beak naked, polished, sparsely punctured at the base. Length 4 mm.; .16 inch.

One ♀, Texas, given me by Mr. W. Jülich.

2. **T. varius**, n. sp.

Pubescence beneath white; above on head, prothorax and base of elytra brownish-yellow; dorsal line of prothorax and scutellum, and main surface of elytra pale cinereous, suture mostly yellow; two broad dark brown bands as in the preceding, but separated only by a narrow oblique cinereous line; interspaces with scattered small dots of longer white hairs; posterior callus more obtuse, less prominent, tipped with yellow pubescence; beak and antennæ ferruginous, the former sparsely punctured. Length 3 mm.; .12 inch.

One ♂, Texas. Belfrage. Easily distinguished by the different color of the pubescence, the more obtuse elytral callus, and the absence of the black sutural spot.

TYCHIUS Sch.

The few species of this genus thus far known in our fauna have the funiculus of the antennæ 7-jointed, with the exception of *T. setosus*, which may perhaps be hereafter recognized as generically distinct; they resemble in form *Centrinus*, though the contiguous front coxæ and toothed claws will enable them to be immediately distinguished.

It is worthy of remark that the first observation concerning the anal segment of the ♂, is recorded by Mr. Brisout de Barneville.* Had the importance of this observation been recognized, and its limitations inquired into, much of the labor I have devoted to the study of the Rhynchophorous series would have been saved, and our knowledge concerning the classification of these insects would be much farther advanced.†

Our species may be thus distinguished :

Surface clothed with scales and pubescence only...	2.
“ “ “ “ “ bristles	6.
2. Scales narrower, hair-like	3.
“ oval	5.
3. Beak rather slender	4.
“ slender at tip, stout at base	1. **arator.**
4. Sides of prothorax rounded	2. **lineellus.**
“ “ “ oblique	3. **sordidus.**
5. Scales small, dense, not mixed with hairs	4. **tectus.**
“ larger, scattered, with pubescence intermixed	5. **semisquamosus.**
6. Of usual size, elytra oblong	6. **hirtellus.**
Very small, elytra oblong-oval	7. **setosus.**

1. **T. arator** Gyll., Sch. Curc. iii. 414; (synom. excl.)

Two specimens, Illinois ; Mr. Walsh. Say apparently confounded this species with the one described by him as *T. aratus*; and Major Gyllenhal suspecting perhaps the existence of some error has, while quoting Say in synonymy, given a different name to the insect received from that author.

Although of the size (3.3 mm.; .13 inch) and form as *T. aratus*, it is quite distinct by the beak narrowed from the base to the tip, less distinctly channeled, and more densely pubescent; the covering is of fine narrow prostrate hair-like scales of a uniform pale dirt color, and the hind thighs are distinctly toothed. *T. aratus* is unknown to me, unless it be *T. tectus*.

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*Tychius de France, Ann. Soc. Ent. Fr. 1862, 765.

†*Tychius amœnus* Say, belongs to *Pachytychius*, (p. 168); *T. corniculatus* Fahræus to *Smicronyx*, (p. 173.)

2. **T. lineellus**, n. sp.

Black, densely clothed with coarse cinereous hair; which is brownish upon the alternate elytral interspaces. Beak slender, not thicker at base, pubescent, and feebly striate, tip naked; eyes small, rounded, distant, moderately convex. Prothorax a little longer than wide, narrowed in front of the middle, rounded on the sides, constricted near the tip; median line cinereous, two indistinct stripes brownish. Elytra wider than prothorax, oblong-oval, humeri rounded, convex; striæ well impressed, interspaces flat, alternately clothed with pale brown hair; suture and scutellum cinereous. Thighs stout, clavate, sinuate beneath near the tip, but not toothed. Length 3.3–4 mm.; .13– .16 inch.

California, three specimens, of which two were collected by Mr. Crotch, at Santa Barbara and Los Angeles.

3. **T. sordidus**, n. sp.

Black, densely clothed with coarse, pale brown hair, broader and scale-like beneath; beak pubescent except at tip, feebly striate, front channeled. Prothorax gradually narrowed from the base, sides oblique, broadly rounded, feebly constricted at tip. Elytra oblong-oval, wider than prothorax, humeri rounded, striæ well impressed, interspaces flat; in certain directions some of the hairs have a metallic lustre. Thighs stout, clavate, sinuate beneath near the tip; hind pair obtusely but not distinctly toothed. Length 4 mm.; .16 inch.

One specimen, Illinois. Differs from the preceding chiefly by the uniform pubescence, and the less rounded sides of the prothorax.

4. **T. tectus**, n. sp. ? *T. aratus* Say, Curc. 26; ed. Lec. i, 294.

Blackish-brown, very densely covered with small, oval, closely applied brownish white scales. Beak slender, not thicker at the base, as long as the head and prothorax, slightly curved; pubescent except at tip, finely channeled for half its length; front with a fine transverse impressed line between the eyes. Prothorax wider than long, narrowed in front of the middle, much rounded on the sides, feebly constricted near the tip. Elytra a little wider than the prothorax, oblong, humeri rounded, striæ well impressed, interspaces flat. Thighs clavate, sinuate beneath, but not toothed. Length 3 mm.; .12 inch.

One specimen, Kansas. The suture and sides of the elytra and dorsal line and two vittæ of the prothorax are paler, but not conspicuously so; the scales of the under surface are broader than those of the upper surface. The teeth of the claws are more approximate than in the foregoing species. The scales of the prothorax converge backwards, as described by Say, but the beak is not transversely indented over the insertion of the antennæ, and the size is smaller.

5. **T. semisquamosus** n. sp.

Elongate, dark brown, clothed with coarse, yellowish pubescence, and large oval cinereous scales, which are dense on the under surface, on three narrow prothoracic lines extending from the middle to the base, and on the first interspace of the elytra; elsewhere they are scattered and separate. Beak as long as the prothorax, curved, densely pubescent, narrow at tip, stouter at base. Prothorax densely punctured, as long as wide, rounded on the sides. Elytra oblong-elongate, about one third wider than the prothorax at base, sides parallel; scutellum clothed with white scales; striæ fine, interspaces flat. Antennæ brown, funicle 7-jointed, first joint longer and stouter, 2–7 equal in length, gradually a little broader; legs brown, thighs broadly toothed. Length 2.5 mm.; .10 inch.

Fort Tejon, California, Mr. Crotch. Resembles in form the next species, but differs by the pubescence being of the usual soft kind, without admixture of stiff, erect bristles. It is also smaller, and the prothorax is not wider than long, and the thighs are broadly toothed.

6. T. **hirtellus** n. sp.

Elongate, dark brown, clothed with yellow-brown scales and pubescence; with rows of longer reclinate hairs on the elytra; scales rather small, rounded oval. Beak testaceous brown, narrow at tip, stout at base, as long as the prothorax, curved, pubescent, tip naked. Prothorax wider than long, strongly rounded on the sides, narrowed and moderately constricted at tip, clothed with scales beneath, and on the sides; dark brown with a broad lateral stripe of pale brown, and a narrower dorsal stripe of white pubescence. Elytra oblong-elongate, wider than the prothorax, sides parallel, then rounded at the tip; striæ fine, well marked, punctures obscured by the dense covering of scales. Antennæ brown, funicle 7-jointed, first joint longer and stouter; 2–7 equal, gradually a little stouter; legs brown, thighs not toothed. Length 3 mm.; .12 inch.

Texas, Belfrage; two specimens.

5. T. **setosus**, n. sp.

Very small, elongate, brown, above coarsely pubescent, beneath densely covered with large scales; beak nearly straight, slender; head scaly. Prothorax hardly wider than long, narrowed in front, sides oblique, scarcely rounded. Elytra a little wider than the prothorax, striæ well impressed, interspaces slightly convex, each with a row of pale bristles. Beak, antennæ and feet ferruginous; thighs unarmed, not sinuate beneath; funicle 6-jointed. Length 1.2 mm.; .045 inch.

Fort Yuma, California; quite different in appearance from the other species, and resembling a small *Erirhinus;* the ventral sutures and claws are, however, of this genus. This is one of the smallest Curculionides in our fauna. The last ventral segment is broadly foveate in my specimens, but this is perhaps a sexual character.

SIBYNES Germ.

I refer to this genus a small species from Lower California which differs from the others of this group by the elytra being separately rounded at tip, thereby exposing a large part of the pygidium. The funicle of the antennæ is 6-jointed; the first joint is elongate, the second a little longer than the third, and the remaining joints are gradually a little broader; club small, oval, annulated. The claws are armed with converging teeth, and the thighs are not toothed.

1. **S. fulvus** n. sp.

Above densely clothed with fulvous scales, scutellum, and beneath cinereous; beak finely punctured, pubescent at base, narrowed towards the tip. Prothorax wider than long, much narrowed and distinctly constricted in front, bisinuate at base, with the medial angle obtusely rounded. Elytra at base not wider than the prothorax, humeri oblique, obtuse; striæ impressed, interspaces flat. Beak, antennæ and legs ferruginous.

Cape San Lucas, Lower California; Mr. Xantus.

PARAGOGES n. g.

A curious little species from California constitutes this genus. It has all the essential characters of *Tychius*, except that the pygidium is somewhat exposed, and the claws are small, simple and approximate. The beak is longer than the prothorax, cylindrical, nearly straight, and rather slender. The antennal grooves descend obliquely below the eyes, which are small, rounded, and coarsely granulated. The funicle is 6-jointed; first and second joints longer, the first being stouter; 3–6 gradually a little broader, somewhat rounded; club oval-pointed, pubescent, annulated. Prothorax as long as wide, constricted near the tip, without postocular lobes. Elytra oblong elongate, wider than the prothorax, separately rounded at tip. Angles of second ventral segment prolonged as far as the fourth segment. Legs moderate, thighs not toothed; tibiæ obliquely truncate at tip, scarcely perceptibly mucronate; tarsi spongy beneath, third joint broader, bilobed; claws small, simple, not divergent.

1. **P. maculatus** n. sp.

Blackish brown, densely clothed with brownish gray scales, head and middle of prothorax darker; the latter with a few white hairs near the base. Elytra with a large, dark spot extending from the base to the middle, and from the suture to the third stria; this spot is emarginate on the sides, and rounded behind; at one-fourth from the tip is a transverse undulated dark line extending from the fourth stria to the suture; the space between this line and the spot is clothed with nearly white scales; the striæ are obscured by the dense covering of scales. Scutellum covered with pale scales. Antennæ nearly black. Length 2 mm.; .08 inch.

California: two specimens collected at San Diego, by Mr. Crotch. This is a very pretty and easily recognized insect.

Tribe XII. CIONINI.

In this tribe the funicle of the antennæ has but five joints; the club is either articulated or annulated. The front coxæ are very large and prominent, contiguous in some of the genera, separate in others; the claws are simple, approximate, free in *Miarus*, but connate in the other genera.

The form is robust, the beak cylindrical; antennæ inserted at about two-thirds the length, the scape attains the anterior margin of the eyes, which are oval, transverse, and moderate in size, and widely separated above and below. The front coxæ are large, and the sternum is short both before and behind; the middle and hind coxæ are separated, the side pieces of the metasternum narrow, and the margin of the elytra not sinuate; the side pieces of the mesosternum do not intervene between the base of the prothorax and the elytra. The ventral segments are not very unequal in length, though the third and fourth are a little shorter; the sutures are deep and angulated in the first two genera, but only slightly curved in *Gymnetron* and *Miarus*.

The species in our fauna indicate four genera.

Pygidium covered..................................	2.
" exposed, antennal club annulated..........	3.
2. Antennal club articulated.........................	NANOPHYES.
" " annulated.........................	CIONUS.
3. Front coxæ contiguous...........................	GYMNETRON.
" " separate..............................	MIARUS.

NANOPHYES Sch.

1. **N. pallidulus** Sch., Curc. iv. 787; *Rhynchænus pall.* Grav., Zool. Syst. 203; &c.

One specimen from Louisiana agrees with the figure of this Southern European species, as given by Du Val; Gen. Col. Eur, pl. 28, f. 135. It is a small, stout insect, ferruginous, thinly and finely pubescent, with the head, beak, oblique band near the base of the elytra, and small posterior spot on each side, dark. The striæ of the elytra are deep, and the interspaces somewhat convex; thighs unarmed. Length 2 mm.; .08 inch.

CIONUS Clairville.

1. **C. scrophulariæ** Oliv., Ent. No. 83, p. 106; pl. 23, f. 314; &c. &c. Sch., Curc. iv. 723; *Curculio scroph.* Linn., Fauna Suec. 603; Syst. Nat. ii, 614; &c.

This common European species is mentioned by Say, (Curc. 21; ed. Lec. i, 287) as occurring in the United States, but without definite locality. Dr. Horn has recently received a specimen collected in Louisiana by Dr. S. V. Summers.

GYMNETRON Sch.

1. **G. teter** Sch., Curc. iv. 755; &c. *Rhynchænus teter* Fabr., Syst. El. ii, 448; *Curcalio teter* Fabr., Ent. Syst. i, ii, 406; &c.

Not rare on *Verbascum thapsus* in Pennsylvania. I have compared it with European specimens, and find no difference. It is a broadly ovate black insect, covered with partially erect yellowish gray pubescence, with the prothorax densely punctured, much broader than long; elytral striæ well impressed, interspaces slightly convex, rugosely punctured; tips separately rounded; beak punctured, finely channeled. Thighs thick, strongly toothed. Length, 3.7 mm.; .15 inch.

MIARUS Sch.

1. **M. hispidulus**, n. sp.

Ovate, convex, black, with a feeble bronzed tinge, clothed with grayish erect hairs. Beak long and slender, extending beyond the middle coxæ, smooth, feebly punctured at base. Prothorax wider than long, narrowed from the base forwards, obliquely but slightly rounded on the sides, densely and finely punctured. Elytra a little wider than the prothorax, shining, striæ deep, slightly punctured, interspaces nearly flat, rugose and punctulate. Thighs not toothed; tibiæ slender, straight, not armed with a hook. Length 2 mm.; .08 inch.

Texas, Illinois, Florida and Pennsylvania.

In well preserved specimens the sides of the prothorax beneath, and the trunk are clothed with dirty white scales. This species is allied to the European *M. distinctus*, but differsby the unarmed thighs.

Tribe XIII. DERELOMINI.

A tribe which contains a few small species of oblong elongate form, glabrous, and feebly punctured, with the hind angles of the prothorax rectangular and better defined than usual. The beak is slender, long, cylindrical, and is usually projected forwards; it can, at most, be bent perpendicularly downwards in repose; the antennal grooves descend obliquely to the lower edge of the eyes, which are moderate in size, nearly round, coarsely granulated and distant from the prothorax. The antennæ, inserted one-fourth from the tip, are slender, the scape reaches the eyes; the funicle is 7-jointed; first joint stouter, and as long as the two following united; the second and the succeeding ones become slightly broader, rather closely connected and merge into the club, which is pubescent, elongate, pointed, and strongly annulated. The prothorax is quadrate for the greater part, then suddenly narrowed to the tip, which is constricted; near the tip there is a short, acute oblique lateral ridge representing a part of what is the lateral margin of the pronotum in other Coleoptera. The prosternum is very long in front of the coxæ, which are nearly contiguous in our species, though distinctly separated in the foreign genera; it is not emarginate in front, and the prosternal sutures are obliterated. The elytra are scarcely wider than the prothorax, parallel on the sides, conjointly rounded behind, so as to cover the pygidium; the surface is punctulate, and the striæ are obsolete. The middle coxæ are moderately separated; the side pieces are diagonally divided, and the epimera attain widely the base of the prothorax beneath, though they do not intervene between the elytra and the pronotum. Metasternum moderately long, side pieces narrow, wider in front. First, second, and fifth ventral segments long; third and fourth united about equal to each of them; surface rather flat, sutures fine and well impressed, nearly straight; second suture slightly curved at the sides; in the ♂, the anal segment is slightly visible at the tip of the fifth ventral. Legs rather stout, thighs compressed not toothed; tibiæ truncate at tip, not mucronate; tarsi spongy beneath;

third joint broad, deeply bilobed; claws divergent, broadly toothed in our species; simple in the foreign genera.

While having a slight relation with the *Magdalini* and *Anthonomini* this tribe adds to the characters it has in common with them and other tribes, one peculiar to itself; the prosternum very long in front of the coxæ. The space between the front coxæ is almost imperceptible in our two species, but as the descriptions of the foreign genera mention them as moderately distant, I infer that that character, as well as the form of the claws, must be regarded of small value in this tribe.

NOTOLOMUS n. g.

This new genus is sufficiently described in the characters of the tribe as detailed above. It merely remains to say that it agrees entirely with *Derelomus* in appearance, but differs by the nearly contiguous front coxæ, and broadly toothed claws. From the South American *Everges*, it abundantly differs by the form of body.

Two species are known to me, both affecting the palmetto tree of the Southern maritime region :

Testaceous, head and prothorax black.................... 1. **bicolor.**
" ; elytra with an oblique dark band near the base 2. **basalis.**

1. N. **bicolor**, n. sp.

Testaceous, head, beak and prothorax black. Beak slender, as long as the prothorax, slightly curved, finely punctured, with a narrow, indistinct smooth dorsal line, head similarly punctured. Prothorax finely punctured, as wide as long, sides parallel for three-fourths the length, where there is a distinct lateral angle produced by the posterior extremity of the small, oblique ridge mentioned above; the outline then is oblique, converging rapidly to the tip, which is constricted at the sides; tip truncate, not reflexed, base bisinuate. Scutellum triangular, black, punctulate. Elytra testaceous, with two transverse bands slightly darker; surface punctulate, with distant rows of larger punctures, representing the striæ. Meso- and metathorax, legs and antennæ testaceous, the latter more slender than in the next species, with the second joint of the funicle longer than the third. Length 2.3–4 mm.; .08–.14 inch.

Enterprise and Capron, Florida; April and May; Messrs. Hubbard and Schwarz. On *Chamærops palmetto;* less abundant than the next species.

2. N. **basalis**, n. sp.

Testaceous, head and beak brown; elytra with an oblique dark band commencing near the base of the third interspace, and running to the suture. Beak moderately curved, slender, punctured. Prothorax as long as wide, finely punctured, strongly constricted at the tip, which is truncate, base bisinuate. Elytra punctulate, with distant, indistinct rows of scarcely larger punctures. Beneath testaceous, antennæ with the funicle stouter; second joint scarcely longer than the third. Length 1.8 mm.; .075 inch.

♂. Beak as long as the prothorax, stouter than in ♀; sides of prothorax with a distinct cusp in front of the middle.

♀. Beak longer than the prothorax, more slender; sides of prothorax more strongly converging from the base, rounded and not angulated in front of the middle.

Capron and Sand Point, Florida, Messrs. Hubbard and Schwarz. On leaves of *Chamærops palmetto,* abundant; varies in having a broad, dorsal, prothoracic stripe brown; also in the elytra band becoming obsolete. This species is *Derelomus signaticollis* and *flavicans* of Dejean's Catalogue. *D. troglodytes* is smaller and entirely testaceous, but is probably only an individual variation.

Tribe XIV. LÆMOSACCINI.

This tribe is composed of a single genus *Læmosaccus,* of which one species occurs in our Southern States. It is easily known by the exposed pygidium; the large, prominent and distant front coxæ, and the breast not channeled. The side pieces of the mesothorax are very transverse, and intervene somewhat between the prothorax and elytra; the episterna of the metathorax are wide, and the epimera are visible behind. The ventral sutures are straight; first and second segments equal, longer than the third and fourth. The legs are stout and short, and the tibiæ are strongly hooked at tip; the tarsi are dilated, and the last joint is very slender, with two very small, simple claws.

The beak is short, stout and cylindrical; the antennal grooves extend to the lower margin of the eyes, which are oval and transverse. The antennæ are inserted about the middle, and are scarcely geniculated; the funicle consists of seven joints and merges gradually into the oval, annulated, pubescent club. There is nothing peculiar in the mouth; the gular peduncle is long, the mentum small, and the palpi short and small; the mandibles are curved, and of the usual form.

The affinities of this tribe seem to be in the direction of *Barini.*

LÆMOSACCUS Sch.

1. **L. plagiatus** Say, Curc. 6; ed. Lec. i, 265; Gyll., Sch. Curc. iii, 626; *Curculio pl.* Fabr. Ent. Syst. El. ii, 485; *Rhina plagiata* Oliv. 83, 234, pl. 33, fig. 512.

Var. *Curculio Nephele* Herbst, Käfer, vii, 54, pl. 99, fig. 4. *Magdalis Nephele* Germ., Ins. Nov. 192.

Middle, Western, and Southern States, as far as Texas; not rare on oak leaves. Varies in the size of the red elytral spot, which sometimes occupies the whole disc, leaving only a narrow margin black. The beak is opaque, flattened above and rugosely punctured in ♂; cylindrical, shining, and sparsely punctured in ♀.

Tribe XV. CRYPTORHYNCHINI.

This tribe contains a large number of genera, which differ so much in appearance and details of structure, that scarcely anything can be predicated of all. It may, however, be stated in general terms, that while in common with several other tribes, the beak is received upon the sternum, and lies in repose in a pectoral groove, this tribe differs from *Zygopini* in the smaller size, and different position of the eyes, which are more or less covered by the prothoracic lobes; and from *Ceutorhynchini* by the pygidium being entirely covered.

The pectoral groove varies in length according to the group; the front coxæ are contiguous in many species of *Conotrachelus*, and other genera of the group *Ithypori*. The side pieces of the mesothorax are obliquely divided, and the epimera attain largely the base of the prothorax on the under surface, without intervening between the pronotum and the elytra. The metasternum is either long or short; the side pieces narrow, and dilated in front. The ventral segments vary in length; the first suture is straight or sinuate, deep, or obliterated; the second and third are somewhat angulated at the sides. The tibiæ are armed with a strong hook at the tip, and the articular surface is oblique; the claws are simple, or toothed.

But three groups are represented in our fauna, of which the second is established upon a new genus.

Pectoral groove confined to the prosternum, open behind:	
Beak long, tarsi dilated	**Ithypori.**
Beak short, tarsi narrow	**Acampti.**
Pectoral groove extending to the mesosternum, sharply limited behind	**Cryptorhynchi.**

Group I. **Ithypori.**

In this group the pectoral groove is confined to the prosternum, and is not closed behind, the mesosternum is sometimes flat, sometimes suddenly declivous. The eyes are coarsely granulated, partly covered in repose by the prothoracic lobes, which are sometimes very well developed, but in other genera are broad and not prominent.

The prothorax is, in most species, comparatively smaller than in the other groups, and usually very coarsely sculptured. The elytra are wider than the prothorax, with prominent humeri, the outer stria is usually abbreviated, and there is a tendency to an epipleural fold. The thighs are toothed in our genera; the tibiæ slender, hooked at the tip; the claws usually toothed, though sometimes simple, or even connate at the base.

The front coxæ are sometimes contiguous, a character not observed in the other groups of this tribe.

Postocular lobes broad, not prominent	2.
" " prominent, front coxæ contiguous; claws toothed; sometimes cleft	CONOTRACHELUS.
2. Claws slender, simple	3.
" approximate, toothed	RHYSSEMATUS.
" " connate at base	CHALCODERMUS.
3. Elytra at base not wider than prothorax	ZAGLYPTUS.
" " " much wider	MICROHYUS.

CONOTRACHELUS Sch.

This genus contains some of the most formidable enemies of our cultivated fruits, especially the stone fruits, such as the plum, apricot, &c.

They are easily recognized by the characters given above, to which may be added the following, which serve to distinguish this from some foreign genera; the antennal grooves are not confluent behind, and the hind thighs are not pedunculated.

A singular though harmless error has been committed by Schönherr and his collaborators in describing the antennæ of most of the species as "longe pone medium rostri sitæ." Geometrically this is correct, as the rostrum when not used in feeding, or in its equally legitimate occupation as ovipositor, is inflexed upon the breast, and directed backwards; its tip is therefore in that position the posterior extremity. Morphologically, however, the beak being an extension of the longitudinal axis of the body, the tip is the anterior extremity; the word *pone* in the description should therefore have been *ultra*. The insertion of the antennæ behind the middle of the beak probably does not occur in this tribe, or group, though in some of the long beaked species of this genus (Nos. 11–13,) they attain nearly that position.

The species indicate the following divisions:

Claws divergent, toothed.. 2.
" approximate, cleft, (as in *Anthonomus*)...................... 3.
2. Prothorax not sulcate, usually carinate....................... I.
(A. Elytral costæ interrupted; thighs bidentate:
B. " entire, or absent, thighs unidentate).
Prothorax broadly sulcate, with two crests in front............. II.
3. Pubescence prostrate, fine..................................... III.
" mixed with stout, erect bristles.............................. IV.

As these divisions require fuller definitions, the synoptic table of the species will be found under each.

Division I—A. Sp. 1–9.

The species of this division are related to *C. nenuphar*, and agree with it in having the costæ of the third and fifth interspaces of the elytra more or less interrupted in two places. The prothorax is not sulcate, but usually distinctly carinate, and strongly constricted near the tip; the thighs are bidentate. These characters, except the last, are evanescent in *C. nivosus*, which shows a passage to Division II, and appears closely allied to *C. leucophæatus*.

The pubescence is short, fine and appressed; it forms a more or less complex pattern of slender pale lines each side of the prothorax, and a broad band behind the middle of the elytra. In well preserved specimens the color and distribution of the pubescence afford easy characters for the recognition of the species; but otherwise, they are closely allied, and require care in their separation.

Costæ of elytra abruptly interrupted....................	2.
" " feebly................................	4.
2. Beak stouter, shorter and more curved..............	3.
" longer, more slender; elytral band pale yellow	1. juglandis.
3. Elytral band white..................................	2. albicinctus.
" " " and yellow........................	3. nenuphar.
4. Prothorax carinate................................	5.
" with a small, median callus..............	4. retentus.
" not or scarcely carinate....................	6.
5. Ventral segments coarsely punctured................	5. seniculus.
" " finely and sparsely punctured......	6. affinis.
6. Costæ of elytra distinct............................	7.
" " obsolete, elytra in great part white..	9. nivosus.
7. Elytral band well-defined...........................	7. elegans.
" " not well-defined........................	8. aratus.

1. **C. juglandis**, n. sp.

Dark brown, varied with black, pubescence fulvous, or dirty yellow, forming a curved bifurcated line each side of the prothorax, and a broad band behind the middle of the elytra. Beak longer than the head and prothorax, cylindrical, not stout, shining, sparsely punctured, with a broad, lateral groove, and two short, finer ones near the base. Prothorax coarsely punctured and rugose, with a very short carina before the middle, and four discoidal tubercles; broadly constricted in front. Elytra with striæ of large quadrate punctures, alternate insterspaces strongly costate, the third and fifth interrupted forming on each a high crest, with a basal and sub-apical elevation. Ventral segments sparsely punctured, fifth more finely and densely. Legs somewhat annulated, thighs bidentate. Length 7 mm.; .27 inch.

Middle States, on walnut. This species is closely allied to the plum weevil, *C. nenuphar*, and has been confounded with it until the present time. It is, however, much larger, the beak is longer, more slender, and less curved; the prothorax is broader and more rounded on the sides, the crest of the fifth elytral interspace is longer, almost as large as that of the third, and overlaps it far more than half its length, and finally the pubescence is of a nearly uniform color, so that the band of the elytra is not variegated with white. The ventral segments are much less densely punctured. It is mentioned as a phytophagic species by Mr. B. D. Walsh, Illinois State Report, 1868, p. 65.

2. **C. albicinctus**, n. sp.

Closely allied to the preceding and next species. Beak longer than the prothorax, stout, curved, deeply striate and punctate. Prothorax as in the preceding, but with a complex line each side of yellow and gray hairs. Elytra as in the preceding, with the crest of the fifth interspace less elevated, and scarcely separated from the sub-basal part of the costa: posterior band broad, narrower towards the sides, composed of pure white hair;

at the base of the third interspace is a conspicuous white spot. Ventral segments coarsely and tolerably densely punctured; fifth more densely, a little less coarsely. Thighs annulated, bidentate. Length 4.7 mm.; .19 inch.

Southern States, Georgia to Texas; four specimens.

3. **C. nenuphar** Harris, Ins. Inj. to Veg. 1st ed. p. 67: 3d ed. p. 75: *Rhynchænus nen.* Herbst, Käfer, vii, 29, pl. 99., f. 8: *Rhynchænus argula* Fabr., Syst. El. ii, 467; Oliv., Ent. No. 83, 192, pl. xxii, f. 301: *Rhynch. cerasi* Peck, Mass. Agr. Repos. 1819, 307. *Conotrachelus arg.* Fahræus, Sch. Curc. iv. 425.

Found over the Atlantic slope, wherever the plum is cultivated or native. It attacks also other stone fruit, and is said to infest apples, pears and quinces (Harris loc. cit). Further observations on this point are desirable, as it is very unlikely that such different plants are attacked by the same species. The crests of the elytra are more abrupt, and the posterior ones more prominent than in the two preceding; the second elevation of the fifth interspace in front of the middle is conspicuously smaller than that of the third interspace, and does not overlap it as much as in *C. juglandis*. The elytral band is composed of yellow and white hair; there is a conspicuous white line at the base of the third interspace. The thorax is longer and less rounded on the sides, than in the two preceding. The beak is stout, curved, and strongly striate and punctured; the ventral segments coarsely and densely punctured; fifth with two setigerous tubercles; I have many specimens before me, which show no variation worthy of note.

An excellent memoir on this pernicious insect by the late B. D. Walsh will be found in the Practical Entomologist, ii, 75; and some additional remarks in the First Annual Report of the State Entomologist of Illinois, 1868, p. 64.

4. **C. retentus** Boh., Sch. Curc. iv, 442, (*retensus* err. typ.); *Cryptorhynchus retentus* Say, Curc. 27; ed. Lec. i, 295.

Kansas; one specimen, Mr. Popinœ. A large species of nearly black color, clothed nearly uniformly with short, dark gray pubescence. The beak is long, slightly curved, strongly striate and punctured. The prothorax is densely rugosely punctured, with a small median callus, and some indistinct tubercles; each side is a vague curved line of pubescence; the sides are much rounded, and strongly constricted in front. The elytra are striate with distant quadrate punctures, the alternate interspaces are moderately carinated, the third and fifth are each interrupted twice, and the seventh broadly interrupted behind the humerus. Ventral segments sparsely punctured; fifth more densely and finely punctured. The thighs are distinctly bidentate. Length 7 mm.; .28 inch.

5. **C. seniculus**, n. sp.

Beak short, stout, curved, strongly punctured and striate, as in *C. nenuphar*. The prothorax is wider than long, constricted in front, rounded on the sides, strongly rugosely punctured, and very distinctly carinate from the tip nearly to the base; each side is a straight, oblique line of fuscous pubescence, united at the tip. Elytra with fuscous or grayish pubescence, more condensed into a transverse band behind the middle, alternate interspaces carinate; third interrupted in two places; fifth interrupted at the pubescent band; two outer carinæ rather indistinct; striæ composed of large, distant quadrate punctures. Thighs not annulated, with one large, acute tooth, and one small denticle. Length 4.6 mm.; .18 inch.

Middle and Western States; Texas. Of the same form and size as *C. nenuphar;* it is distinguished from the next species chiefly by the broader, more strongly carinate prothorax; by the two lines of pubescence being straight, and meeting at the front margin; and by the first ventral segment being less punctured than the others. It is *C. seniculus* † Dej. Cat.

6. **C. affinis** Boh., Sch. Curc. iv, 429.

Of the same form as *C. elegans,* but larger, with the thorax similarly sculptured, more deeply constricted in front, distinctly carinate from the tip to the middle, with a transverse discoidal impression about the middle; sides broadly rounded, pubescence brownish yellow, lines broad, curved, sinuate, and irregularly branching on the disc and sides. Elytra thinly pubescent, with a short basal line on the third interspace, and a broad posterior band brownish yellow; first carina broadly interrupted in two places; second feebly interrupted near the base; third feebly interrupted in front of the middle in one specimen, but not in the other; striæ composed of large, distant, quadrate punctures. Beak long, slender, strongly striate and punctured. Thighs with two small, acute teeth, annulated. Ventral segments shining, sparsely and not coarsely punctured; fifth with two inconspicuous tubercles. Length 5–7 mm.; .2–.27 inch.

Western States, two specimens, of which one was sent by the late B. D. Walsh. The more sparsely and less coarsely punctured ventral segments distinguish this easily from all the neighboring species.

7. **C. elegans** Boh., Sch. Curc. iv ,428; *Cryptorhynchus el.* Say, Curc. 18; ed. Lec. i, 283.

Of the same form, size and color, as *C. seniculus,* but the beak is longer and less curved; the prothorax is narrower, feebly carinate, and faintly tuberculate; the lines of pubescence are narrow, curved, and do not meet at the front margin. The carinæ of the elytra are quite similar, except that the second one (that of the fifth interspace) is not interrupted behind at the transverse band; the pubescence is more yellow, and less mixed with gray. The teeth of the thighs are small, acute, and nearly equal. The ventral segments are more coarsely punctured than in *C. affinis,* and the first is not less so than the others.

8. **C. aratus** Germar, Sp. Nov. (*Cryptorhynchus*), 283; Boh. Sch. Curc. viii, 2, 26.

I refer, with some hesitation, to this species, a specimen collected in Texas by Belfrage, which resembles *C. retensus* in form, color, and sculpture, but is much smaller, (4 mm.; .16 inch), and has the carina of the fifth interspace not interrupted near the base. It differs from all the other species in the group by the punctuation of the ventral segments; first and second very coarsely but not densely punctured; third and fourth strongly punctured; fifth finely and more densely punctured, with two distinct tubercles as in *C. nenuphar.* The thighs are armed with two small acute denticles.

9. **C. nivosus**, n. sp.

Rather stouter than *C. elegans*, brown varied with black, pubescence white varied with fine chocolate brown. Beak short, stout, curved, finely punctured and striate. Prothorax not wider than long, broadly rounded on the sides, moderately constricted near the tip; very coarsely but not densely punctured, not carinate; with a complex white reticulation each side connected transversely on the disc in front of the middle; a short posterior dorsal line white. Elytra with striæ composed of large, distant quadrate punctures, interspaces flat; surface in great part white, with a transverse, common basal spot, (a continuation of the brown thoracic disc), and large, apical space brown; there is also a transverse band at the middle, which is variegated brown and white, dilated into a large, sutural brownish blotch; all these markings are connected at the suture. Body beneath densely brown-pubescent, metasternum and side pieces white; ventral segments, 1–4 each with a white spot near the sides, coarsely punctured; fifth with two basal white spots, finely and densely punctured. Legs annulated, thighs with one tooth and a small denticle. Length 5 mm.; .20 inch.

Colorado, abundant. This species resembles somewhat in appearance the Texan and Mexican *C. leucophætus*, but is not otherwise allied to it.

Division I—B. Sp. 10–18.

The species of this division differ from the preceding, chiefly by the alternate interspaces of the elytra being elevated, and not interrupted into short, abrupt crests; the inner one (of the third interspace) is in every case entire. In other respects they resemble those of the preceding division in several important characters; the prothorax is more or less carinate, not grooved; the surface is finely pubescent, with, at most, lines of very short bristles on the elytra. On the other hand, the thighs are armed with a single, usually acute tooth, without a trace of the second tooth or denticle.

a. Humeri dentiform; ventral segments 2–4 sparsely punctured.. **10. cratægi.**

b. Humeri not dentiform; ventral segments densely and coarsely punctured; beak long and slender; antennæ inserted about the middle; prothorax punctured, not cribrate, mesosternum protuberant.

Prothorax strongly constricted in front.............. 2.
“ “ “ “ “ gradually narrowed; pubescence yellow-gray, speckled with white **11. adspersus.**

2. Femoral tooth large, acute; white markings conspicuous, without intermixed bristles................ **12. similis.**

Femoral tooth obtuse; pubescence intermixed with bristles.. **13. naso.**

c. Humeri not dentiform; beak shorter, strongly striate; antennæ inserted about one-third from the tip.

Ventral segments nearly uniformly punctured........ **2.**

" " sparsely, fifth finely and densely punctured; prothorax sparsely cribrate, elytra with large, white markings................................ **18. plagiatus.**

2. Mesosternum flat, declivous........................ **3.**

" prominent; prothorax densely and coarsely punctured.............................. **14. posticatus.**

3. Prothorax plicate towards the middle.............. **4.**

" uniformly cribrate....................... **15. geminatus.**

4. Plicæ approximate; pubescence short.......... ..... **16. infector.**

" coarser, and more reticulate, pubescence mixed with longer bristles .... **17. cribricollis.**

10. **C. cratægi** Walsh, Proc. Bost. Soc. Nat. Hist. ix, 1863, 311.

New York, Georgia, Illinois. The form is broader and more squat than in any other of our species, and it is easily distinguished by the humeri being obliquely truncate, with the outer angle dentiform; this appearance is produced by a short carina between the third and fourth elevated ridge of the elytra, which meets the fourth ridge at an acute angle. The beak is punctured and very deeply striate; head densely punctured; prothorax carinate, elevated at the middle, broadly transversely impressed in front, densely and finely cinereous pubescent, with an indistinct pattern of paler pubescence each side, meeting in front of the middle. The elytra are clothed with dirt-colored, slightly mottled, fine pubescence, with rows of short, whitish setæ; the third, fifth, seventh and ninth interspaces are strongly carinate, leaving broad furrows, each marked with two rows of quadrate punctures. The body beneath is thinly clothed with yellowish pubescence, sparsely punctured and cribrate; the third and fourth ventral segments still more sparsely, and the fifth rather densely punctured. Thighs armed with a large, not very acute tooth. The middle coxæ are more widely separated than in the other species. Length 5 mm.; .20 inch.

The beak of the female is a little longer and less deeply striate than in the male; the last ventral segment in both sexes is foveate each side, and feebly impressed at the middle near the tip; but these impressions are broader in the female.

It is *C. humeralis* ‖Dej. Cat.

11. **C. adspersus,** n. sp.

Black, robust, clothed with very short, prostrate scale-like yellow pubescence, with lines on the prothorax, and dots on the elytra of white pubescence. Beak half as long as the body, slender, slightly curved, punctured, not striate. Prothorax as long as wide, gradually narrowed in front from the base, feebly rounded on the sides, slightly constricted in front; slightly carinate; punctures large, shallow, indistinct on account of the pubescence. Elytra one-half wider at base than the prothorax, humeri prominent, abruptly rounded; striæ composed of distant, oblong punctures; interspaces finely rugose, flat; third, fifth, seventh and ninth finely but not strongly carinate. Body beneath coarsely punctured; mesosternum protuberant; last ventral segment with three very faint impressions. Thighs feebly annulated, with a broad, obtuse tooth. Length 7 mm.; .28 inch.

Kansas, Mr. E. A. Popinoe, one specimen. The rows of punctures of the elytra, from the absence of pubescence, appear black; the white dots occupy the distance between them, and contrast elegantly with the yellow pubescence of the main surface. The white lines of the prothorax are narrow, and not very conspicuous; they converge but scarcely meet at the front, and are slightly curved; the middle carina is also clothed behind with white hair; the scutellum and a small spot at the base of the third interspace of the elytra are also white.

12. C. **similis** Boh., Sch. Curc. iv, 416.

Southern States. A large, (6.2 mm.; .25 inch), and robust species clothed with short, ferruginous pubescence, and handsomely variegated with white, forming a complex pattern each side of the prothorax, and irregular posterior bands on the elytra. The beak is long and slender, punctured, feebly striate; the prothorax broader than long, not narrowed from the base to the middle, then rounded and much narrowed to the tip, which is strongly constricted at the sides; the disc is very densely punctured, and finely carinate from the tip to the middle. The punctures of the elytral striæ are very large and quadrate, and the alternate interspaces are finely carinate. Body beneath coarsely and rather densely punctured; mesosternum protuberant; abdomen with three rows of more densely pubescent spots; first and second ventral segments more sparsely at the sides; fifth ventral feebly impressed at the tip. Thighs armed with a large, acute tooth.

The beak in the ♂ is half as long as the body, opaque, punctured, finely striate towards the base, with the antennæ inserted about one-third from the tip; in the female the beak is much longer, about three-fourths the length of the body, polished, not striate, feebly and sparsely punctured, with the antennæ inserted behind the middle.

13. C. **naso**, n. sp.

Blackish brown, thinly clothed with dirty brown pubescence. Beak brown, slender, curved, one-half as long as the body, shining, indistinctly punctured, finely striate towards the base. Prothorax wider than long, rounded on the sides, suddenly narrowed and constricted near the tip; very densely, rugosely punctured, carinate, marked with two small discoidal spots of white pubescence. Elytra one-third wider than the prothorax, more sinuate at base than usual, humeri more advanced in front, and rounded; striæ composed of small, closely placed quadrate punctures, alternate interspaces finely carinate; surface more densely pubescent, and with rows of very short bristles, indistinctly banded transversely. Under surface densely, coarsely punctured; mesosternum protuberant; last ventral segment with a round impression near the tip. Thighs annulated, front and middle pair not toothed; hind pair very obtusely toothed. Length 6 mm.; .24 inch.

Georgia and Texas. I perceive no sexual differences in the four specimens in my collection.

14. **C. posticatus** Boh., Sch. Curc. iv. 406.

Southern States; the references to Say given by Boheman, and copied in Gemminger and Harold, should be hereafter omitted, as was done in the Melsheimer Catalogue; no description was ever published by Say, and the citation from the Journal of the Academy of Natural Sciences of Philadelphia is erroneous. This species resembles in appearance *C. naso*, but differs by the shorter and strongly striate beak, the different position of the antennæ; by the coarser punctuation of the prothorax, which is less suddenly narrowed and less constricted in front, and not marked with two discoidal spots of white pubescence; by the elytra having the humeri, and sides more rounded; and finally by all the thighs being strongly though not acutely toothed. The under surface is very coarsely punctured, and the last ventral segment has a broad, rounded impression. The mesosternum is protuberant and perpendicular in front, as in the species of Division II, and in the three preceding species. In some specimens the elytral interspaces are equally, finely carinate; in others the alternate carinæ are obsolete.

15. **C. geminatus** ⸸ Dej. Cat. 322: *puncticollis* ‖ Walsh, Proc. Bost. Soc. Nat. Hist. ix, 1863, 310.

Maryland, Illinois, Kansas. Related to the next three species, but easily distinguished by the prothorax being densely and uniformly cribrate, not at all plicate; the striæ of the elytra are composed of large, quadrate punctures, interspaces broad and flat; the third and fifth are slightly elevated behind the middle; the seventh is subcarinate near the humeri, which are somewhat obliquely rounded; the pubescence is yellowish, very thin and fine, mottled with grayish bands, with a white spot at the base of the third interspace, and rows of very short bristles. Body beneath coarsely punctured; ventral segments 3–5 more finely, but not very densely punctured; fifth not impressed in ♂; with a shallow but well defined circular impression at the tip in ♀; in the only specimen of the latter sex in my collection, the second ventral segment is also transversely elevated, and declivous behind; this, however, may be a deformity. Thighs armed with a large, obtuse tooth. Length 4.2 mm.; .17 inch.

16. **C. infector** Boh., Sch. Curc. viii, 2, 49.

One specimen, New York. Of the same size, form and color, as the preceding, but with the prothorax distinctly carinate, and more coarsely sculptured; the cribrate punctures being confluent, so as to leave longitudinal ridges; the quadrate punctures of the elytral striæ are more approximate; the interspaces narrower and somewhat convex, and the pubescence more yellow, and not mixed with gray. The under surface is uniformly and coarsely punctured; last ventral segment not impressed.

17. **C. cribricollis** *Cryptorhynchus cribr.* Say, Curc. 28; ed. Lec. i, 296: Boh., Sch. Curc. iv, 446.

New York, Louisiana, Texas. Also of the same form and size, but with the sculpture of the prothorax much coarser, so that the surface appears reticulate; the pubescence of the elytra is coarser, and the bristles longer and more numerous. The punctures of the striæ are large, quadrate and approximate, and the interspaces slightly convex. Body beneath coarsely and densely punctured, last ventral segment not impressed; thighs acutely toothed.

18. **C. plagiatus**, n. sp.

Black, variegated with ferruginous pubescence, elytra in great part, and metasternum densely clothed with small, white scales. Beak as long as head and prothorax, stout, curved, punctured and pubescent, feebly striate. Prothorax as long as wide, rounded on the sides, narrowed, but scarcely constricted at tip, coarsely but not densely cribrate, not carinate, mottled with ferruginous and white spots. Elytra one-half wider than prothorax at base, humeri abruptly rounded, disc convex, striæ composed of large punctures, interspaces nearly flat; an irregular humeral patch, and a very broad band about the middle, not extending to the suture, and the sides from the base to behind the middle are white; rest of the surface mottled, ferruginous and white. Metasternum white, abdomen with lateral spots of denser pubescence; under surface very sparsely cribrate-punctate, punctures very few on the ventral segments 1–4; fifth finely and densely punctured, with a large, shallow circular impression. Legs annulated; thighs armed with an obtuse tooth, and a feeble trace of a denticle; mesosternum not protuberant. Length 4 mm.; .16 inch.

Texas, Belfrage; one specimen.

Division II. Sp. 19–21.

In this division the form is rather squat, the elytra at base being nearly twice as wide as the prothorax; the latter is coarsely sculptured, and has two crests in front of the middle, between which is a wide furrow. The beak is curved, a little longer than the head and prothorax, strongly punctured and striate. The alternate interspaces of the elytra are strongly carinated, and sometimes abruptly interrupted. The under surface is very coarsely punctured; the mesosternum horizontal and protuberant in front; the legs are annulated; the thighs armed with a large tooth and a small denticle.

Three species are known to me, which may be tabulated as follows :

Elytral costæ entire, or nearly so................ 2.
" " abruptly interrupted.............. **19. tuberosus.**
2. Elytra mottled, strongly costate.................. **20. anaglypticus.**
" in great part white, feebly costate........ **21. leucophæatus.**

19. **C. tuberosus**, n. sp.

At first sight this species resembles closely *C. nenuphar*, but it is smaller and stouter, and the sculpture of the prothorax is very different. The beak is more strongly striate; the prothorax is longer than wide, slightly rounded on the sides; densely, rugosely punctured, opaque, with two acute crests running from the tip to the middle; each side are two narrow, white lines, crossed by a curved one in front of the middle. The elytral striæ are composed of large, quadrate punctures, and the costæ are interrupted almost exactly as in *C. nenuphar;* the pubescence is very fine, short and fulvous, condensed into a narrow, transverse band just behind the middle. Antennæ, tibiæ and tarsi ferruginous. Length 3 mm.; .12 inch.

South Carolina; Dr. Zimmermann; Illinois, Dr. Horn. There are scarcely perceptible rows of short bristles on the elytra.

20. **C. anaglypticus** Fahræus, Sch. Curc. iv, 418; *Cryptorhynchus anagl.* Say, Curc. 18; ed. Lec. 282.

Massachusetts to Kansas; Georgia, Texas; abundant. I have one very small specimen in which the color is concealed by a uniform dirt-colored crust; it is *C. ineditus* ⸸ Dej. Cat.

21. **C. leucophæatus** Fahræus, Sch. Curc. iv, 417.

Described first from Mexico, but not rare in Texas. Allied to *C. anaglypticus*, but larger, (nearly 5 mm.; .20 inch), with the sculpture of the prothorax coarser, the crests more evident, and a short median carina; the elytral costæ are less elevated, and the surface is in great part covered with white pubescence to within one-fourth of the tip, which is dark brown and mottled; the base for a short distance is clothed with fulvous pubescence.

DIVISION III. Sp. 22.

This division contains but a single species of ordinary form, with the elytra covered in great part with very fine, short pubescence, not mixed with longer hairs, or with bristles. The beak is rather stout and slightly curved; the front coxæ are contiguous, the thighs obtusely toothed, and sinuate beneath near the knee; the claws are cleft at tip, and less approximate than in the next division. The antennæ are inserted about one-fifth from the end of the beak. The mesosternum is not very wide; the hind part is obliquely declivous; the front part perpendicular.

22. **C. fissunguis**, n. sp.

Dark brown, nearly black. Beak stout, as long as the head and prothorax, punctured, shining towards the tip, then carinate and coarsely striate. Prothorax coarsely and deeply cribrate, towards the tip with longitudinal ridges, the middle one of which is more distinct; scarcely longer than wide, slightly rounded on the sides, then more strongly rounded and narrowed to the apex, which is feebly constricted at the sides. Elytra one-half wider than the prothorax, base truncate, humeri prominent, nearly rectangular; sides parallel, then obliquely narrowed to the tip; striæ composed of large, distant punctures; surface densely covered with short, yellow pubescence, which is darker on the posterior fourth; a denuded transverse band about the middle. Beneath coarsely punctured; thighs annulated with yellow pubescence. Length 5–5.5 mm.; .20–.22 inch.

Louisiana, three specimens.

DIVISION IV. Sp. 23–24.

This division contains small species of less robust form, easily known by the fine pubescence being mixed with long, stout, erect bristles. The beak is longer than the head and prothorax, not stout, very slightly curved, punctate and striate; antennæ inserted one-fourth from the tip; mesosternum rather wide, perpendicularly declivous in front. Under surface coarsely, uniformly punctured; thighs armed with one tooth, claws cleft, the tooth being as long as the outer part. Elytra not costate. Front coxæ contiguous as usual.

Prothorax coarsely cribrate.......................... **23. erinaceus.**
" punctured............................... **24. hispidus.**

23. **C. erinaceus**, n. sp.

Blackish, densely clothed with depressed mud-colored, scaly pubescence, with erect bristles intermixed, which are short on the prothorax, and long on the elytra. Legs, antennæ and beak brown; the last named slender, slightly curved, sparsely punctured, feebly striate towards the base. Prothorax wider than long, slightly rounded on the sides, moderately narrowed in front, and feebly constricted; tolerably densely cribrate. Elytra one-third wider than prothorax, humeri prominent, abruptly rounded, striæ composed of large, shallow punctures, interspaces slightly convex. Body beneath shining, sparsely pubescent, coarsely not densely cribrate; last ventral segment not impressed. Thighs armed with an obtuse tooth. Length 3 mm.; .12 inch.

Southern States. Judging from MS. drawings made by my father, this is *Cœlosternus erinaceus* ‡ Dej. Cat. 318.

24. **C. hispidus**, n. sp.

Of the same form as the preceding but smaller, brown covered with cinereous, scaly pubescence; prothorax not wider than long, coarsely punctured, with the bristles not shorter than those of the elytra; elytra about one-third wider than the prothorax, rather more elongate than in *C. erinaceus*, striate and setose in a similar manner. Body beneath similarly punctured, beak, antennæ and legs paler brown, femoral tooth smaller and more acute. Length 2.5 mm.; .10 inch.

One specimen, Georgia.

MICRALCINUS* n. g.

A species from Florida which has an almost deceptive resemblance to *Tyloderma variegatum*, constitutes this genus. It is closely allied to *Conotrachelus*, and has the antennal grooves confluent behind in a similar manner. The front coxæ are also nearly in contact, but the form of body is quite different, the elytra are not suddenly wider than the prothorax, regularly oval, and emarginate at base; the beak is shorter, scarcely longer than the prothorax, and the claws are not toothed. The postocular lobes are as large as in *Conotrachelus*, and the mesosternum is protuberant and perpendicular in front.

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* This genus does not appear in the table of genera, as it was overlooked when the form was closed.

1. **M. cribratus**, n. sp.

Black-brown, shining, sparsely pubescent, mottled on the elytra with small spots of fine gray hair, and towards the tip with patches of a brown color. Beak rather stout, scarcely as long as the prothorax, deeply grooved and punctured, head punctured. Prothorax as long as wide, rounded on the sides, narrowed in front, and feebly constricted: cribrate with large deep punctures; with a small smooth callus at the middle. Elytra oval, emarginate at base, about one third wider than the prothorax; humeri rounded; sides slightly rounded, more obliquely towards the tip; striæ composed of large deep punctures, becoming smaller towards the tip, where the striæ are somewhat impressed. Beneath strongly, not densely punctured. Antennæ brown, second joint of funicle nearly as long as the first; thighs slender, sinuate beneath, not toothed; tibiæ nearly straight, armed with a terminal hook; claws small, divergent, simple. Length 3.2 mm.; .12 inch.

Capron, Florida; Messrs. Hubbard & Schwarz.

RHYSSEMATUS Sch.

Concerning this genus I have little to add to the excellent synoptic table and remarks published by Dr. Horn, (Proc. Am. Phil. Soc. 1873, 463) except that the differences between it and *Chalcodermus* as stated by Lacordaire are somewhat illusive; the corbels of the hind tibiæ seem in some specimens of *R. lineaticollis* to be quite distinct. On the other hand, there is a great difference in the form of the claws, which in *Rhyssematus* are cleft as in *Anthonomus*, but in *Chalcodermus* are approximate and connate at base, almost as in *Smicronyx*, &c. There is also an important difference in the two outer striæ of the elytra, which are separated by a costa in the first, just as in *Conotrachelus*, but in the latter the outer striæ consists of only a few large punctures extending one-third the length from the base, and the interspace is flat.

In view of the importance of these characters it becomes necessary to place *Chalcodermus pruinosus* Boh., (Sch. Curc. viii, 2nd, 13) in this genus; from the other species it is easily distinguished by the less rugose punctuation of the prothorax.

CHALCODERMUS Sch.

The remarks of Dr. Horn upon the three species of this genus which remain after removing *C. pruinosus* leave nothing to be added.

ZAGLYPTUS n. g.

The two very small species which constitute this genus resemble in form and coarseness of sculpture *Rhyssematus*, but differ essentially by the antennæ and tarsi. The prothorax is also more strongly sinuate, and much more deeply margined at the base. The funiculus is rather short, with the first joint stouter and elongated, the others are short, closely connected, so as to appear indistinct, and gradually pass into the club, which is elongate oval, in one species, and elongate ovate and obtuse in the second; the number of short joints under a high power is six, and they do not differ in length, but gradually increase in thickness. The beak is as long as the head and prothorax, slightly curved, stouter in one species (sex?) than in the other. Prothorax gradually narrowed from the base forwards, strongly constricted and tubular at tip, without postocular lobes, not emarginate beneath; the base is strongly sinuate and margined, scutellar lobe acute. Elytra ample, convex, a little wider than the prothorax at base, gradually narrowed behind from the humeri which are rather prominent. Pectoral groove shallow, antecoxal ridges very fine; prosternum prominent and foveate behind the front coxæ which are moderately distant; mesosternum short, declivous, not prominent, middle and hind coxæ widely separated. Ventral segments, first and second very large, connate, with the suture obliterated at the middle; third and fourth short, sutures deep, nearly straight; fifth as long as third and fourth united, rounded behind, flat. Legs rather short, slender, thighs unarmed, tibiæ slightly mucronate at tip, tarsi with the third joint emarginate, not broader than the preceding; last joint as long as the others united; claws slender, divergent, not toothed.

1. **Z. sulcatus**, n. sp.

Dark reddish brown; head and tubular constriction of prothorax smooth, beak deeply sulcate each side; prothorax very coarsely cribrate, sparsely pilose with long, erect whitish hairs. Elytra deeply sulcate, grooves punctured, interspaces narrow, convex, each with a row of distant, small punctures, from which proceed long, erect hairs; disc from base to behind the middle red. Trunk and first ventral segment with very large, sparse punctures. Length 1.8 mm.; .07 inch.

One specimen from Mobile, Alabama, given me by the late Col. Motschulsky, under the MS. name *Nanophyes rubidus*.

2. **Z. striatus**, n. sp.

Of the same form and sculpture as the preceding, somewhat lighter in color. Beak more slender (a sexual character?), less deeply sulcate, with two or three long hairs each side near the base. Prothorax with more numerous erect hairs. Elytra with coarsely punctured shallow striæ, interspaces wide, flat, each with a series of long, pale, erect hairs proceeding from scarcely perceptible punctures. Length 1.8 mm.; .07 inch.

One specimen, Pennsylvania; Mr. S. S. Rathvon. The essential difference between this and the preceding is in the elytral sculpture. The other characters are dependent on sex, and on better preservation of the specimen.

MICROHYUS n. g.

As the preceding genus resembles *Rhyssematus* in miniature, so does this resemble the smaller, setose *Conotracheli*, but differs chiefly in the funiculus of the antennæ and the simple, divergent claws. The beak is shorter than the prothorax, nearly straight, with the antennæ inserted about one-third from the tip. Scape scarcely reaching the eyes which are small and lateral; funiculus rather short; first joint larger and stouter, six remaining joints short, slightly increasing in thickness, closely united; club large, oval-pointed, annulated. Prothorax gradually narrowed from the base, broadly constricted near the tip, feebly rounded on the sides; postocular lobes wanting. Elytra ovate, convex, broader and sub-truncate at base, humeri prominent, gradually narrowed behind, and strongly declivous. Prosternum deeply emarginate in front, pectoral groove deep, antecoxal ridges strongly developed; front coxæ moderately distant. Mesosternum declivous; middle and hind coxæ widely separated; metasternum short. Ventral segments with straight, distinct sutures; first a little longer than the second; third and fourth shorter; fifth flat, rounded behind, as long as the second. Legs slender, rather short, thighs not toothed, tibiæ slightly mucronate at tip; tarsi with the third joint broad, bilobed; last joint as long as the others united; claws slender, divergent, not toothed.

1. **M. setiger**, n. sp.

Black, covered with a dirty crust, and clothed with stout bristles, erect on the prothorax, reclinate on the elytra. Head and beak rather finely punctured. Prothorax strongly punctured. Elytra with deep striæ, interspaces somewhat convex; the alternate ones a little wider. Beneath coarsely and densely punctured. Length 2.1 mm.; .085 inch.

Two specimens, Georgia.

Group II. **Acampti.**

As *Camptorhinus* differs from the *Cryptorhynchi* by the pectoral groove being confined to the prosternum, though distinctly limited behind, so is the singular insect which constitutes this group similarly separated from the *Ithypori*, by the shorter beak resting upon the front coxæ. The body is elongate, as in *Camptorhinus*, and the tibiæ are stout, sinuate on the inner side, and strongly hooked at the tip. The other characters are peculiar, the tarsi are not dilated nor spongy beneath, and the club of the antennæ is pubescent and sensitive only near the tip.

These characters indicate relationships in various directions, such as the *Byrsopidæ* and *Cossonidæ*, but the insect preserves unchanged all the essential characters of the Cryptorhynch type of *Curculionidæ*.

ACAMPTUS n. g.

A very singular species of elongate form, clothed with dirt-colored hair, and short, erect bristles represents this genus.

The beak is short and stout, as long as the head, and expanding gradually into it, so that no distinct separation appears; the antennal grooves begin about one-third from the end, and descend obliquely to the eyes, which are small, lateral, and not prominent. Antennæ with the scape extending to the front margin of the eyes, clavate; funiculus not longer than the scape; first joint stouter and about as long as its width; remaining joints five, short, gradually increasing in width, closely connected, passing gradually into the club which is elongate, obtuse at tip, corneous at base, pubescent on the outer half. Prothorax longer than wide, gradually narrowed in front; broadly, but not deeply constricted in front, slightly produced at the middle, postocular lobes not well marked, base feebly sinuate. Elytra a little wider than the prothorax, humeri rectangular, slightly rounded, sides parallel, rounded at tip. Prosternum deeply and broadly emarginate in front, pectoral groove broad and deep, antecoxal ridges very prominent, front coxæ very prominent, narrowly separated, supporting the end of the beak; prosternum behind the coxæ not prominent; mesosternum small, middle coxæ narrowly separated; hind coxæ distant, metasternum with the anterior process nearly acute; hind margin broadly emarginate; ventral sutures straight; third and fourth segments short, the others longer. Legs short, stout, thighs not toothed; tibiæ sinuate on the inner side, strongly armed at tip; tarsi as long as the tibiæ, not dilated nor spongy beneath; last joint as long as the two preceding; claws slender, divergent, not toothed.

1. **A. rigidus**, n. sp.

Elongate, black, covered thickly with dirty brown hair, and short, erect, stout bristles, which conceal the sculpture. Prothorax longer than wide, slightly rounded on the sides, broadly constricted near the apex, which is rounded; base feebly bisinuate; dorsal channel faint. Elytra about one-fourth wider than the prothorax, cylindrical, rounded behind; striæ composed of quadrate punctures; first, third, fifth and seventh interspaces wider, more prominent, and furnished with conspicuous rows of bristles; eighth and ninth with a few bristles; second, fourth and sixth very narrow, not prominent. Beneath, very coarsely punctured, covered with a dirt-colored crust, with scattered, short, coarse hairs. Length 3–4 mm.; .12–.16 inch.

South Carolina to Texas, not uncommon. Judging from a MS. drawing by my father, it is *Botrobatys troglodytes* † Dej. Cat.

Group III. **Cryptorhynchi.**

In this group the pectoral groove is distinctly limited behind. The other characters are variable, though the front coxæ are never contiguous as in some *Ithypori;* a slight appearance of an epipleural fold exists in many species. The claws are toothed in *Phyrdenus,* but simple, and generally small in the other genera.

The genera in our fauna are not numerous, but present several categories indicating sub-groups, which it is unnecessary to define at present, as their number would be increased by a careful study of exotic forms. *Micromastus* might be placed with equal propriety in *Ithypori,* near *Arthrostenus,* but for the present I prefer associating it with *Acalles:* the only specimen in my collection is much broken.

Metathoracic epimera distinct.................................. 6.
" " indistinct.............................. 2.
2. Metasternum as long as first ventral segment................. 5.
Metasternum very short, humeri rounded...................... 3.

3. Club of antennæ annulated.............. 4.
   " of antennæ solid.................. EURHOPTUS.
4. Claws very small, approximate.......... ACALLES.
   " larger, divergent................. MICROMASTUS.
5. " slender, divergent................ PSEUDOMUS.
6. Tibiæ strongly compressed.............. 9.
   " slender, more or less sinuate...... 7.
7. Mesosternum deeply emarginate......... 8.
   " feebly " .... TYLODERMA.
8. Claws appendiculate, divergent.......... PHYRDENUS.
   " simple, divergent.................. CRYPTORHYNCHUS.
9. Tibiæ not serrate........................ 10.
   " more or less serrate.............. ZASCELIS.
10. First ventral suture deep................ CŒLOSTERNUS.
   " " " sinuate, faint at the middle........................... BAROPSIS.

ACALLES Sch.

The very short metasternum, with indistinct episterna, the oval elytra with rounded sides, and the small tarsal claws will enable the species of this genus to be easily recognized. The mesosternum is usually deeply excavated for about one-half its length, so that the pectoral groove ends about the anterior limit of the middle coxæ; but this is not the case with *A. nuchalis* and *pectoralis;* the hind part of the mesosternum is protuberant, so as to make an obtuse angle with the metasternum. The distance from the middle to the hind coxæ is not greater than from the middle to the front pair; the mesosternum at the side appears longer than the metasternum, a very unusual character in Coleoptera. The last two species described below are anomalous, and when studied in connection with the foreign species, will probably be considered as constituting new genera; in *A. nuchalis* the metathoracic side pieces are as distinct as in *Cryptorhynchus;* in *A. pectoralis*, the mesosternum is scarcely more emarginate than in *Tyloderma*.

Mesosternum deeply emarginate.................... 2.
   " broadly " .... 12.
2. Scales thick, erect, without intermixed bristles...... 3.
   " appressed, with bristles intermixed.......... 7.
3. Elytra with conspicuous pale markings............ 4.
   " not conspicuously marked.................. 5.
4. Black, with large, posthumeral spot, and band behind the middle of elytra white.................. 1. nobilis.
   Black, with sub-basal band and a few spots white.. 2. basalis.
5. Elytra not tesselated.............................. 6.
   " with brown scales, tesselated with paler..... 3. porosus.
6. Interspaces of elytra moderately wide.............. 4. turbidus.
   " " very narrow.................. 5. clathratus.

7. Prothorax carinate, bristles short.................. **8.**
“ not carinate.......................... **9.**
8. Basal angles of elytra not prominent............. **6. carinatus.**
“ “ “ well defined................ **7. granosus.**
9. Bristles stout, clavate........................... **10.**
“ soft, slender.............................. **8. sordidus.**
10. Elytra with basal and broad posterior band of yellow scales.. **11.**
Elytra with small white spots arranged in two interrupted bands................................. **9. clavatus.**
11. Elytra rounded on the sides...................... **10. crassulus.**
“ nearly parallel, form elongate............... **11. longulus.**
12. Prothorax not channeled, occiput clothed with white scales.. **12. nuchalis.**
Prothorax channeled, head uniform brown........ **13. pectoralis.**

1. **A. nobilis**, n. sp.

Black, coarsely punctured, with thick, erect brown scales, which when viewed in certain directions seem like short, obtuse bristles. Beak shining, naked, punctured; head densely clothed with small pale scales, frontal fovea large. Prothorax as long as wide, much rounded on the sides, narrowed before and behind; punctures very deep, disc convex with a faint trace of a median carina. Elytra with rows of deep, large, but rather distant oval punctures; interspaces very convex, except the two outer ones; there is a single marginal point behind the humeral angle; the white markings are conspicuous, of snow-white scales, as follows: a spot on the fifth, sixth and seventh interspaces near the base, connected with two small spots on the fourth, forming a sub-humeral blotch; a band behind the middle, composed of spots on the first to the fourth interspace; and many small spots irregularly disposed, formed of three or four white scales. Legs annulated with brown and pale scales. Ventral segments with a row of lateral spots of pale scales. Length 7.8 mm.; .31 inch.

Texas; Messrs. Boll and Belfrage; three specimens. Mr. Ulke has a species from Florida similar to this, but stouter, with the sides of the elytra angulated near the base.

2. **A. basalis**, n. sp.

Similar to the preceding, but smaller and less robust. Beak more strongly punctured, carinate; head covered with pale scales, extending half way upon the beak, front channeled. Prothorax with small, scattered spots of pale scales. Elytra with the suture, a transverse band at the base, enclosing a black humeral spot, and some scattered small spots of pale brown scales; striæ composed of more approximate quadrate punctures, interspaces except the two outer ones convex. Body beneath more coarsely and deeply punctured than in *A. nobilis*, and thinly clothed with pale scales, rather more dense at the sides of the ventral segments. Legs annulated. Length 5.5 mm.; .22 inch.

One specimen collected by me in Colorado.

3. **A. porosus**, n. sp.

Similar in form to *A. basalis*, but larger; the beak is longer, and distinctly carinate; head covered with pale scales extending upon the beak; front channeled. Prothorax very deeply and densely punctured, finely carinate, irregularly clothed with brown scales. Elytra with rows of approximate large quadrate punctures, the intervals between which are nearly as high as the interspaces; second, fourth and sixth interspaces wider and more convex, tesselated with spots of pale and dark brown; rest of the surface with scattered pale scales. Beneath coarsely and deeply punctured, thinly clothed with pale scales; legs annulated. Length 8 mm.; .32 inch.

Two specimens from Colorado; one collected by myself, the other in the cabinet of Dr. Horn.

4. **A. turbidus**, n. sp.

Rather narrow, black, densely clothed with thick dirt colored scales. Beak naked, punctured, subcarinate; head densely clothed with small scales, front channeled. Prothorax deeply and densely punctured as usual, not carinate, longer than wide, narrower in front than at base; sides broadly rounded. Elytra with rows of large, approximate, quadrate punctures, interspaces wide, somewhat convex; markings indistinct, but when present, consisting of an irregular basal fascia, and an undulated one behind the middle, very much as in *A. basalis.* Under surface deeply and coarsely punctured, thinly clothed with dirt colored scales. Length 7 mm.; .28 inch.

Arizona, Dr. Horn; several specimens. Related to *A. basalis*, but narrower, and with differently colored scales.

5. **A. clathratus**, n. sp.

Narrow, black, clothed with dirt colored scales. Beak rather stouter, punctured and subcarinate, head covered with small scales extending upon the beak, front channeled. Prothorax as in the preceding. Elytra with rows of large, approximate, quadrate punctures, which almost overlap, so that the interspaces are very narrow and indistinct. Body beneath coarsely and deeply punctured, thinly clothed with dirt colored scales. Length 4.7 mm.; .19 inch.

One specimen found by me in Colorado. Differs from the preceding by the larger punctures of the elytra, and narrower interspaces.

6. **A. carinatus**, n. sp.

Black, densely covered with thick scales, of dark brown color; mottled (but not tesselate) with pale scales upon the elytra, forming indistinct transverse lines; an oblique zigzag band about the middle is the most conspicuous of these markings. Prothorax as long as wide, sides strongly rounded, widest about the middle, much narrowed in front, broadly but not deeply constricted near the tip; disc coarsely and densely punctured, very distinctly carinate. Elytra at the widest part scarcely wider than the middle of the prothorax; oval, sides rounded, basal angles not prominent; striæ composed of quadrate large punctures; interspaces distinctly defined; third, fifth and eighth somewhat more convex; each interspace with a row of very short, thick, inconspicuous bristles. Length 4 mm.; .16 inch.

One specimen, Illinois. Easily known by the strongly carinate prothorax.

7. **A. granosus**, n. sp.

Rather stout, black, densely clothed with dark brown scales. Prothorax as wide as long, rounded on the sides, scarcely wider at the middle than at the base, much narrowed in front, and broadly constricted; disc densely punctured, strongly carinate, marked with a short, transverse white line at the middle, interrupted at the dorsal line; the parts of this transverse line are nearly joined by a short, posterior dorsal white line, forming a T-shaped mark; there are also a few inconspicuous dots of white pubescence. Elytra ovate, distinctly wider at the middle than the prothorax, truncate at base, with the basal angles well defined; striæ composed of large, shallow, quadrate punctures; interspaces well defined, the alternate ones more elevated, and interrupted so as to become tuberculate; the brown scales are mottled with dots of pale scales, of which the most conspicuous form a narrow, irregular, transverse band about the middle; the bristles are very short, but more distinct than in the preceding species. Length 3.4 mm.; .13 inch.

Florida, at Enterprise, Haulover and Indian River; Messrs. Hubbard and Schwarz.

8. **A. sordidus**, n. sp.

Robust, black, clothed with a dirt colored crust concealing the sculpture, with intermixed slender, curved bristles pointing backwards; beak naked and punctured towards the tip, not carinate; front not channeled. Prothorax a little wider than long, rounded on the sides, obsoletely channeled. Elytra striate, with the interspaces slightly convex, with rows of reclinate bristles. Length 2.5 mm.; .10 inch.

Texas, Belfrage; one specimen.

9. **A. clavatus** Say, Curc. 29; ed. Lec. i, 297: Boh., Sch. Curc. iv, 354.

Enterprise, Florida; Messrs. Hubbard and Schwarz; found also in Illinois. This small species is thickly clothed with brown scales, and but slightly varied in color; there are, however, two interrupted bands composed of small white spots on the elytra; the striæ are composed of large, quadrate punctures; the interspaces are wide, slightly convex and furnished with rows of long, clavate bristles. The prothorax is very coarsely punctured, not carinate, and the bristles are a little shorter than upon the elytra. Length 2.5 mm.; .10 inch.

The female is stouter than the male, with the prothorax not much wider at the middle, and the elytra much more rounded on the sides.

I have received from Col. Motschulsky a specimen from New Orleans, which seems quite similar, except that the punctures of the elytral striæ are so large that the interspaces become very narrow. I am disposed to believe that this appearance is owing to partial abrasion of the scales. If, however, with a larger series of specimens, it should be found to be really distinct, the name *A. scabrosus* Motsch, will be retained for it.

10. **A. crassulus**, n. sp.

Rather robust, black, densely clothed with dark brown scales, and erect thick bristles, which are shorter upon the prothorax. The latter is about as long as wide, rounded on the sides, slightly wider at the middle, much narrowed in front and broadly constricted; densely punctured, with a few pale brown scales at the sides, and a small spot at the middle of the base. Elytra as in *A. clavatus;* brown towards the base, and with an irregular, broad, yellowish brown band behind, occupying the posterior third of the elytra. Legs clothed with yellow brown scales. Length 2.5 mm.; .10 inch.

Haulover, Florida; Messrs. Hubbard and Schwarz.

11. **A. longulus**, n. sp.

This species is colored exactly like the preceding, but is of very different form, and the bristles of the elytra are longer. The prothorax is a little longer than wide, and is distinctly wider at the middle than at the base. The elytra are oblong, nearly parallel on the sides, suddenly wider at base than the prothorax, with the humeral angles prominent and rounded; less obliquely narrowed, and more broadly rounded behind than usual. Length 2.5 mm.; .10 inch.

Haulover, Florida; Messrs. Hubbard and Schwarz. I should consider this as the ♂ of the preceding species, if the bristles of the elytra were not so much longer. The form of the elytra is quite different from any other *Acalles* known to me, and resembles that seen in certain small *Cryptorhynchi.* The longitudinal distance between the middle and hind coxæ is also greater than in the other *Acalles*, and fully as great as in *C. minutissimus;* but the metathoracic episterna are not visible, while in the insect last named they are narrow, and very apparent.

12. **A. nuchalis**, n. sp.

Very robust, clothed with brown scales, dark and paler intermixed. Beak strongly punctured and sulcate, finely carinate, occiput clothed with pale scales. Prothorax nearly twice as wide as long, rounded on the sides, scarcely wider at the middle, then rapidly narrowed to the tip, but not constricted; coarsely and densely punctured, with three very indistinct pale brown lines; a slight trace of a narrow median smooth line. Elytra ovate, truncate at base, much rounded on the sides, obliquely narrowed behind; basal angles obtuse, not prominent; striæ composed of large, quadrate punctures; interspaces wide, slightly convex, each with a row of moderately long, pale, clavate bristles; the scales of the posterior third are more mixed with yellowish brown, and are limited in front by an angulated line of pale scales extending to the fifth stria. Beneath nearly black, with scattered pale scales; mesosternum less deeply emarginate than in the preceding species, but more strongly than in *A. pectoralis.* Metasternum as short as in the other species, but with the episterna narrow and distinct. Length 4 mm.; .16 inch.

Capron, Florida; Messrs. Hubbard and Schwarz; one specimen. An anomalous species, which with the form of *Acalles* combines the distinct metathoracic side pieces of *Cryptorhynchus*. The last joint of the tarsi is rather longer, and the claws somewhat larger than in the other species of *Acalles;* the beak is also more slender and differently sculptured. A revision of the tribe with careful study of the exotic forms will probably show the propriety of placing this species as a distinct genus.

13. **A. pectoralis**, n. sp.

Robust, black, covered with depressed scales of dark brown color, variegated with pale on the elytra, forming narrow, undulated bands, and on the prothorax indistinct stripes; intermixed bristles stout, short, erect. Antennæ testaceous. Beak coarsely punctured, finely carinate, scaly, tip naked; head scaly like the beak, front not impressed. Prothorax wider than long, convex, much rounded on the sides, distinctly constricted in front, channeled. Elytra much rounded on the sides, striæ deep and fine, interspaces wide, slightly convex. Body beneath densely but less coarsely punctured, clothed with yellowish brown scales; mesosternum very broadly emarginate. Legs annulated. Length 3 mm ; .12 inch.

One specimen, Illinois. Quite distinct from all the others by the less emarginate mesosternum, and the depressed scales of the prothorax and elytra. It is possible that these differences should be considered as generic, but I am unwilling to so regard them without a careful study of foreign species.

EURHOPTUS n. g.

I have separated as a distinct genus a small pyriform, robust species, not scaly, but thinly clothed with reclinate bristles, in which the metasternum is very short as in *Acalles*, but which differs essentially by the club of the antennæ; this is stouter, less elongate, and annulated only near the tip; the funicle is 7-jointed; the second joint a little longer than third, 3–7 equal, short, closely united. Beak stout, as long as the prothorax. Mesosternum horizontal, emargination broad, with acute edge. First ventral segment longer than metasternum, with a deep, polished triangular impression; intercoxal process triangular; second segment shorter than third and fourth united; fifth as long as the three preceding united. Thighs not toothed, tibiæ slender, straight, mucronate at tip; tarsi with third joint broadly dilated; fourth small with very small, approximate claws. Elytra connate; scutellum not visible.

1. **Eu. pyriformis**, n. sp.

Robust, pear-shaped, convex, dull black, thinly clothed with pale, reclinate curved bristles. Beak stout, rather depressed, finely punctured, naked at tip, subcarinate; eyes small, depressed, front not impressed; antennæ brown. Prothorax not wider than long, narrowed from the base, sides straight, base nearly straight, disc densely and coarsely punctured, feebly transversely impressed at a distance from the tip. Elytra fitting closely to the prothorax, strongly rounded on the sides; striæ composed of very large, rather distant foveæ; interspaces near the suture somewhat convex. Length less than 2.5 mm.; .10 inch.

Three specimens from Illinois. The ventral surface is nearly smooth; the fifth segment punctulate and broadly concave.

MICROMASTUS n. g.

I have established this genus upon the Californian *Cryptorhynchus gracilis* Boh., Eugenies Resa, Col. 140.

It is related by the short metasternum and indistinct side pieces to *Acalles*, but differs by the mesosternum being small, and but very slightly prominent, though the concavity of the front perpendicular surface shows that the tip of the beak rests against it in repose; the pectoral canal is deep, though not sharply limited behind the front coxæ, which are nearly contiguous. The body is elongate; the elytra wider than the prothorax, elongate-oval, sharply margined at the base, with the humeri not prominent. The prothorax is longer than wide, broadly rounded on the sides, truncate in front, with the postocular lobes nearly obsolete, and fringed with vibrissæ. Head convex, eyes small, coarsely granulated; beak as long as the prothorax, not stout, slightly curved, rather depressed at tip; antennæ inserted about one-fourth from tip, slender; club pubescent, not very distinctly annulated on the outer half. Legs moderate, thighs scarcely clavate, feebly toothed beneath; tibiæ (front pair) sinuate on inner side; tarsi with third joint broad, bilobed, fourth as long as the others united; claws large, divergent, simple. Ventral sutures straight; second and fifth segments equal to third and fourth united.

1. **M. gracilis** (Boh.), l. c. sup. (*Cryptorhynchus*).

Elongate, brown, thinly clothed with white pubescence, beak punctured and striate towards the base, with a narrow, smooth dorsal line. Prothorax deeply and coarsely punctured. Elytra with rows of approximate, quadrate punctures; interspaces narrow, convex; behind the middle on each side are two spots of white pubescence; the hinder one extending from the first to the fifth stria, the anterior one from the fourth to the sixth. Beneath coarsely and densely punctured. Length 3.6 mm.; .15 inch.

San Francisco; collected by Mr. Henry Edwards; the specimen is very imperfect.

PSEUDOMUS Sch.

In this genus the metasternum, though short and without distinct episterna is longer than in *Acalles*, and nearly or quite as long as the first ventral; the mesosternum is horizontal, continuing the plane of the metasternum, with which it is closely united; the emargination is deep, extending to about the middle of the coxæ. The second ventral is not longer than the third or fourth separately; the fifth is a little longer. The thighs are armed with a tooth in some species, unarmed in others; the tibiæ are straight, slightly mucronate at tip; tarsi with third joint broadly dilated; fourth joint of usual size; claws simple, divergent. The beak is more slender than in *Acalles*, and the general outline is that of *Chalcodermus*.

1. **Ps. truncatus**, n. sp.

Dark brown, thinly clothed with small, brown scales; beak slender, as long as the prothorax, nearly smooth at tip, punctured and feebly striate at base; head punctured. Prothorax wider than long, narrowed from the base forwards, sides nearly straight, convex; not densely punctured, with a median stripe and a small spot each side, smooth. Elytra with striæ composed of large, distant punctures, with an irregular basal fascia, and a large, common spot behind the middle white; the latter prolonged backwards along the suture nearly to the tip. Beneath thinly clothed with yellowish scales; ventral segments 2–4 nearly smooth; fifth with a few large punctures; thighs obtusely toothed. Length 4.6 mm.; .18 inch.

South Carolina and Georgia; Dr. Zimmermann. I have adopted the specific name given by Dejean in his Catalogue.

2. **Ps. sedentarius** (Say), Curc. 30 (*Oleogonus*); ed. Lec. i, 298; Boh., Sch. Curc. iv, 267.

Florida; unknown to me. Differs from the preceding by the unarmed thighs, and differently formed posterior elytral spot.

TYLODERMA Say. (1831.)

Analcis Sch. (1837.)

In this genus the beak is rather short and stout, and the mesosternum, while very prominent, and forming a sharp edge which limits the pectoral groove, is very feebly emarginate, resembling in this respect *Acalles pectoralis*. From *Acalles* it differs evidently, besides many other characters, by the more elongate form; the very distinct postocular lobes, the prothorax prominent and rounded in front; the longer metasternum, with distinct, though narrow side pieces. From *Cryptorhynchus* it is distinguished by the form of body, the feebly emarginate mesosternum, and the 6-jointed funiculus, as well as by the stouter beak, with more suddenly declivous antennal grooves. The first ventral suture is nearly obliterated.

The species fall naturally into two divisions already indicated by Dr. Horn, Proc. Am. Ent. Soc. 1873, 467; the first contains the type of *Tyloderma*, the second that of *Analcis*; I have, therefore, restored the former name to the conjoined genus.

Division I.

In the first division the color is not metallic; the pubescence is in distinct spots, and sometimes scaly; the abdomen is coarsely punctured, and the punctures of the elytra are large. These species resemble in appearance *Mæmactes*, but differ very greatly in structural characters.

I have nothing to add to the characters of the four species of this group, as given by Dr. Horn, but to say that *T. foveolatum* varies greatly in size, some specimens being no larger than *T. variegatum*, from which it is at once distinguished by the foveate rather than punctate prothorax.

1. **T. morbillosum.** *Analcis morb.* Lec. Pac. R. R. Expl. insects, p. 58; Horn, Proc. Am. Phil. Soc. 1873, 467.

One specimen, San Francisco, California.

2. **T. foveolatum** Say, Curc. 19; ed. Lec. i, 284. *Cryptorhynchus fov.* Germ., Sch. Curc. iv, 140: *Analcis fov.* Horn, loc. cit. 468.
New York to Texas.

3. **T. variegatus.** *Analcis var.* Horn, Pr. Am. Phil. Soc. 1873, 468.
Southern and Western States.

4. **T. fragariæ.** *Analcis frag.* Riley, Report on Insects of Missouri, iii, 42, fig. 14: Horn, loc. cit. 469.
Illinois and Missouri, infesting strawberry vines.

5. **T. longum**, n. sp.

Elongate, black, densely clothed with small black scales, which make the surface opaque; mottled irregularly with white on the elytra. Beak strongly punctured. Prothorax longer than wide, widest at the middle, where the sides are strongly rounded, much narrowed in front, feebly narrowed behind, feebly constricted near the tip, which is broadly rounded; coarsely and confluently punctured, very finely, almost imperceptibly carinate. Elytra scarcely wider than the prothorax, cylindrical, elongate, base truncate, humeri rectangular rounded; striæ deep, composed of large approximate punctures, interspaces narrow, the outer ones convex. Beneath coarsely punctured, somewhat shining; thighs obsoletely toothed. Length 3.7 mm.; .15 inch.

One specimen, Haulover, Florida; Messrs. Hubbard and Schwarz. Very distinct by the more elongate form, and denser sculpture; the beak is also longer and more slender, but the mesosternum, as in the other species, is only feebly emarginate.

Division II.

In this division the color is metallic, the surface glabrous; the sculpture fine, or even indistinct, and the abdomen smooth, or partly so.

6. **T. æreum.** *Bagous æreus* Say, Curc. 29; ed. Lec. i, 297; *Analcis æreus* Rosensch., Sch. Curc. iv. 279; Horn, Proc. Am. Phil. Soc. 1873, 460.

The specimens of *T. æreum* as observed by Dr. Horn vary greatly in size and sculpture; in some the prothorax is nearly smooth, in others it is sparsely and coarsely punctured on the flanks; in others again the disc is in addition distinctly punctured.

With an increased series of specimens I observe that in two individuals the disc of the prothorax is deeply and sparsely punctured, and the flanks coarsely punctured; the ventral segments 1–2 are very distantly and finely punctured; the third and fourth are deeply, transversely impressed, and the front or convex part is marked with a series of fine punctures; the fifth joint is sparsely but deeply punctured. Length 3.6 mm.; .14 inch.

Middle and Western States.

In specimens from South Carolina and Florida, of large size, the prothorax even on the flanks is smooth; the punctures of the elytra less regular and larger, the surface somewhat rugose, and the ventral segments are smooth, the fifth is transversely concave near the tip; the metasternum is also smooth, as is not the case in any other specimens in my collection. Length 4.5 mm.; .18 inch.

Two very small specimens from Georgia have the disc and flanks of the prothorax nearly smooth, and the ventral segments also smooth, except the fifth, which is very finely punctured and surrounded behind by a marginal line, but not transversely impressed; the legs are brown. Length 2.3 mm.; .09 inch.

I believe that these forms indicate species which the amount of material at my disposal does not permit me to distinctly define, and which I shall therefore abstain from naming. Careful observation of their habits and collection in quantity, when possible, will enable the correctness of this view to be tested in future.

One specimen from Texas, sent by Mr. Belfrage, is, however, so different as to require specific recognition.

7. **T. baridium**, n. sp.

Dull black, with a bronze tinge; beak strongly punctured, front not channeled, transverse impression feeble; head sparsely, finely punctured. Prothorax deeply but not densely punctured, not longer than wide, sides parallel behind, obliquely narrowed in front of the middle, scarcely constricted at tip. Elytra at base very little wider than the prothorax, humeri not prominent, slightly wider for a very short distance, then gradually narrowed to the tip; punctures of the rows distant, obsolete behind, interspaces very finely and sparsely punctulate, with scarcely perceptible white hairs in these punctulations, and in the punctures of the rows. Mesosternum and metasternum coarsely and sparsely punctured; ventral segments sparsely but gradually more deeply punctured; fifth with a rounded impression. Length 4 mm.; .16 inch.

PHYRDENUS n. g.

The form is precisely that of *Conotrachelus anaglypticus*, but the pectoral canal is deep and terminates in the mesosternum, which is excavated for almost its whole length, as in *Cryptorhynchus;* the claws are broadly appendiculate at base.

The beak is as long as the prothorax, slightly compressed, gibbous and suddenly separated from the front at base; the antennal grooves are oblique, as in *Conotrachelus;* the antennæ inserted one-fourth from the tip, rather slender, funicle 7-jointed; club elongate-oval, annulated. Prothorax with very large, postocular lobes, concealing the eyes in great part in repose. Eyes coarsely granulated; large, distant above. Side pieces of metathorax moderately wide, distinct; ventral sutures straight; second and fifth segments a little longer than the third and fourth separately. Legs rather slender, thighs feebly clavate, not toothed; tibiæ bent at the base, slender, feebly mucronate at tip; tarsi with third joint bilobed; fourth long with divergent, appendiculate claws.

1. **P. undatus**, n. sp.

Short and stout, blackish, densely clothed with very small scales forming a dense crust, of a pale brown color, varied with darker on the prothorax, base and tip of the elytra; small, erect bristles are intermixed, forming tufts on the prothorax, and rows on the elytra. Prothorax as wide as long, sides parallel for two-thirds the length, strongly narrowed in front and deeply constricted; disc uneven, deeply and broadly channeled, with four conspicuous tufts of black bristles. Elytra at base nearly twice as wide as prothorax; humeri prominent, rounded; striæ not very distinct; third, fifth and seventh interspaces slightly elevated; the base and tip are dark brown, with an intermediate, very broad, slightly variegated band of pale brown; there is also a short, pale line at the base of the third interspace. Beneath densely punctured; punctures of first ventral segment coarser. Length 4.6 mm.; .18 inch.

Missouri, (Schuster); Georgia, Texas, (Belfrage). This species differs remarkably from all others known to me by the head being convex behind, and deeply concave between the eyes, so that the base of the beak appears gibbous. Judging from a MS. drawing of my father, this is *Cryptorhynchus undatus* † Dej. Cat.

CRYPTORHYNCHUS Ill.

The species are numerous, and as very properly suggested by Lacordaire need subdivision into several genera. The peculiar modifications of structure noted by him are not represented in our fauna, and the species mentioned below seem to agree in all characters of importance. They may be divided into groups, commencing with those species which more nearly resemble in form *Conotrachelus.*

A. Antennæ slender, second joint of funicle as long as the first; 3–7 diminishing gradually in length, club indistinctly annulated.

a. Elytra suddenly wider than prothorax at base; prothorax carinate.
* Thighs straight beneath .... Sp. 1-3.
** Thighs sinuate near the tip.......................... Sp. 4.
b. Elytra but little wider at base than the prothorax:
* Prothorax strongly constricted at tip.................. Sp. 5-8.
** Prothorax carinate, feebly constricted at tip............ Sp. 9.

B. Antennæ stouter, funicle with joints 2–7 equal in length, gradually broader, club very distinctly annulated..... Sp. 10-11.

DIVISION A—a*.

The species of this division bear a general resemblance to *Conotrachelus* in consequence of the elytra being suddenly wider than the prothorax, and the humeral angles prominent, rectangular and rounded; the sides gradually taper behind. The prothorax is strongly carinate, gradually narrowed from the base forwards, strongly constricted near the tip, with not very well-marked postocular lobes. The beak is slender, longer than the prothorax, curved, cylindrical, carinate, and striate at base. The antennæ are elongate, the funicle is slender, with the second joint as long as the first, and the following gradually diminish in length and become more rounded; the club is scarcely annulated. The legs are slender, the thighs not clavate, with a feeble indication of two small distant teeth, which become evanescent in the smaller species. The tibiæ are straight, with a sudden bend, and a distinct angle in some species on the outer edge near the knee; the third tarsal joint is broadly bilobed, and the fourth is as long as the first, rather clavate, with moderate sized divergent claws.

The species may be tabulated as follows:

Black, with an oblique white spot on each elytron; tibiæ angulated at base.............................. 2.
Brown, variegated; tibiæ not angulated at base......... 3
2. Larger, thighs feebly bidentate...................... 1. **parochus.**
Small, thighs not toothed............ .... 2. **bisignatus.**
3. Prothorax and elytra with bunches of black bristles... 3. **fuscatus.**

1. **C. parochus** Say, Curc. 19; ed. Lec. i, 285; *Curculio parochus* Herbst, Käfer, vii, 55; tab. 99, fig. 5.

Middle and Western States. Closely resembles the next species, but is readily distinguished by the greater size (6–6.5 mm.; .24–.26 inch). The two femoral teeth are small and distant.

2. **C. bisignatus** Say, Curc. 19; ed. Lec. i, 284; *C. luctuosus* Boh., Sch. Curc. iv, 146; ibid. viii, 1, 348; *C. misellus* Boh., ibid. iv, 120, (fide Boheman).

Middle, Southern and Western States, to Texas. If the locality of the synonym last cited be correct, it is also found in Brazil. The thighs are sometimes entirely unarmed, sometimes very obsoletely bidenticulate. Length 3.5 mm.; .14 inch; it does not seem to vary in size, but the white mark of the elytra is sometimes very indistinct.

C. obliquefasciatus Boh., Sch. Curc. viii, 1, 349, is merely a more distinctly marked variety in which the oblique spot extends from the seventh to the second stria, becoming a band, and the scattered white dots are more conspicuous. One specimen is only 2.5 mm.; .10 inch long.

I have three specimens from the Middle States in which the upper surface is clothed with brown scales, and the elytral spots are more distinct; the humeri seem less prominent, and the form more elongate. It seems to be *C. pumilus* Boh., Sch. Curc. iv, 122. It is probably a distinct species, but I can find no other characters upon which to separate it, than those I have mentioned.

3. **C. fuscatus**, n. sp.

Blackish brown, clothed with pale and dark-brown scales, and bunches of erect blackish bristles. Beak moderately stout, as long as the prothorax, carinate, striate and coarsely punctured at base, then naked and more finely punctured; antennæ inserted nearly at the middle of the beak, slender, club pubescent, indistinctly annulate; head punctured, vertex very finely carinate. Prothorax as wide as long, strongly narrowed from the base, rounded on the sides, constricted in front, deeply and densely punctured, carinate; disc with three conspicuous tufts of bristles, and two smaller ones near the front margin; others scattered singly; scales brown, with three narrow indistinct lines of paler; base squarely truncate each side, prolonged into a distinct angle at the scutellum, which is black. Elytra one-third wider at base than the prothorax, humeri rounded, prominent, sides not dilated, but parallel, and then gradually narrowed behind, clothed mostly with pale-brown scales, darker at the base and tip, and with a broad middle band sometimes indistinct; striæ fine, punctured, third, fifth and seventh interspaces more elevated; the third and fifth appear interrupted on account of crests of erect blackish bristles; of these there are three long ones on the third and three or four small ones on the fifth; also a few small bunches on the second interspace. Beneath clothed with pale-brown scales, deeply and densely punctured; thighs slender, not, or obsoletely toothed; tibiæ straight, not angulated at base as in *C. parochus* and *bisignatus*. Length 5.5 mm.; .22 inch.

Southern and Western States. So far as the meagre description given by Say goes, this species agrees well with his *C. obliquus*, but as Boheman and Say agree in stating that that name belongs to the species called by the former *C. umbrosus*, I do not feel at liberty to apply it to the present one, for which I have adopted the Catalogue name of Dejean. If our fauna had more representatives of this genus, I would separate this as a distinct division, differing from the preceding, not only by the tibiæ and stouter beak, but by the ninth elytral interspace being not elevated, and by the postocular prothoracic lobes being more prominent.

DIVISION A—a**.

The single species representing this division in our fauna is of rather large size, more elongate, and less *Conotrachelus*-like than the species of the preceding division, from which it differs chiefly by the thighs being deeply sinuate beneath near the outer end, and by the two denticles being near together. The beak is stouter than in *C. parochus*, but hardly more so than in *C. fuscatus*, carinate and striate at base; the antennæ are inserted about two-fifths from the end; the funicle is slender; second joint as long as the first, the others gradually shorter; club not perceptibly annulated. Prothorax rounded on the sides, strongly narrowed in front, and feebly constricted, postocular lobes not very distinct; base squarely truncate each side, prolonged into a distinct angle at the scutellum. Elytra one-third wider at base than the prothorax, nearly parallel on the sides, then narrowed to the tip, humeri rounded, less prominent than in the first division; striæ composed of large punctures; third, fifth, and seventh interspaces slightly elevated. The ventral segments are very coarsely punctured, and the fifth in the only perfect specimen before me has a very deep circular impression, probably sexual, and indicating the ♂. The thighs are slender, with two small approximate teeth, then deeply sinuate near the tip; the tibiæ are straight, and rather strongly mucronate at tip, suddenly bent at base near the knee; tarsi as in the first division.

4. **C. obliquus** Say, Curc. 28; ed. Lec. i, 296 (?); *C. umbrosus* Boh., Sch. Curc. iv, 116.

Middle States; our largest species. I only restore the name of Say to this insect in deference to the statement of both Say and Boheman that the two names represent the same species. My own preference would be to ignore this assertion altogether, to call No. 3 *C. obliquus*, and the present one *umbrosus*. It seems to me to be a case of confusion of two species by Mr. Say, similar to that recorded in the genus *Calosoma;* when by not observing very obvious differences, he sent to Dejean under the name of *C. calidum*, a very distinct species afterwards described by the latter as *C. Sayi*.

A—b*.

The species representing this division in our fauna are of an elongate-oval form, with the elytra at base but little wider than the prothorax; the humeral angles are obtusely rounded not very prominent; the sides are parallel, then obliquely narrowed to the tip. The prothorax is wider than long, much rounded on the sides, narrowed in front of the middle, and very strongly constricted, postocular lobes broad; the disc is carinate, the base broadly emarginate each side, with the angle in front of the scutellum very small, not prominent. Scutellum small, white. The beak is as long as the prothorax, rather stout, somewhat flattened; the antennæ are inserted about the middle of the beak; funicle slender, second joint as long as the first; the others gradually diminishing, club elongate-oval, annulated. Thighs slightly clavate, armed with a single tooth, which is nearly obsolete in the smaller species; tibiæ nearly straight; tarsi as in the preceding divisions.

The body is densely clothed with small, depressed scales, with very short, stout bristles intermixed, which in *C. apiculatus* become spines.

Thorax with an elongate median pale spot...........	**5. obtentus.**
“ “ sides broadly pale, disc black....	**6. fallax.**
Smaller, elytra with pale transverse band...........	**7. minutissimus.**
Alternate spaces of elytra with a row of spines.	**8. apiculatus.**

5. **C. obtentus.** *Curculio obt.* Herbst, Käfer, vii, 38, pl. 99, fig. 2. *Cryptorhynchus ypsilon* Boh., Sch. Curc. iv, 100.

Middle and Southern States; the specimen described by Herbst was evidently badly preserved, and the median pale line of the prothorax had disappeared; normally this line is wider at the middle, of a narrow lozenge-shape, and includes a dark central spot. When the front part is abraded it assumes a Y-shape. The third and fifth elytral interspaces are strongly elevated; the femoral tooth is quite distinct. Length 5.3–7.5 mm.: .16–.3 inch.

6. **C. fallax,** n. sp.

Elongate-oval, black, covered with pale brown scales, with intermixed short bristles; disc of prothorax and large common triangular spot on elytra black. Beak strongly punctured, as long as the prothorax, flattened, scarcely subcarinate, with a smooth narrow median line; antennæ brown with slender funicle; club oval-acuminate, annulated. Prothorax wider than long, narrowed gradually in front, broadly rounded on the sides, strongly constricted near the tip, deeply and densely punctured; very finely carinate behind; base rather strongly bisinuate, medial angle small, distinct; scutellum very small, covered with white scales. Elytra very little wider than prothorax at base, humeri rectangular, slightly rounded, not prominent, sides parallel, then obliquely narrowed to the tip; striæ composed of large, subquadrate punctures, interspaces somewhat convex; third and fifth more elevated. Legs slender, thighs with one very small tooth; tibiæ straight, outer edge angulated near the base; tarsi as in the preceding species. Length 4.3 mm.; .17 inch.

Illinois to Texas. The size of the thoracic and elytral dark space is somewhat variable; it may, however, be stated in general terms, that it occupies nearly the whole of the base of the prothorax, and narrows to the apex, of which it covers the middle third; it extends on the elytra from the humeri obliquely backwards, ending on the suture about the middle; in other specimens there is a brown, irregular band behind it and connected with it, but this is probably produced by an abrasion of the scales. The body beneath is densely clothed with dirt colored scales.

I have adopted the name given in Dejean's Catalogue.

7. **C. minutissimus**, n. sp.

Oval, moderately elongate, brown, varied with blackish spots, clothed with black, brown and pale scales; the latter forming an elongate basal spot on the prothorax, and a transverse band behind the middle of the elytra, angulated at the suture; short, stout, erect bristles are intermixed. Beak stout, flattened, punctured, naked from the tip to the middle (antennæ not seen). Prothorax wider than long, narrowed gradually in front, moderately rounded on the sides, strongly constricted near the tip, not carinate, postocular lobes nearly obsolete; base very feebly bisinuate, median angle very obtuse, indistinct. Scutellum hardly visible. Elytra very little wider than prothorax at base; humeri rounded, not prominent; sides slightly rounded, then obliquely narrowed to the tip; striæ composed of large punctures, which are concealed by the scales, so that the striæ appear to be fine and impressed. Thighs unarmed; tibiæ straight; outer edge angulated near the base; tarsi as in the preceding species. Body beneath deeply and densely punctured; clothed with dirt colored scales. Length 2.5 mm.; .10 inch.

Virginia to Louisiana. I have adopted the Catalogue name of Dejean for this very pretty little species. Col. Motschulsky gave me two individuals as his *Acalles pictus* and *fasciculatus*, but I believe that the names were never published. In generic characters this species differs greatly from *Acalles*, though somewhat resembling *A. clavatus* in size and form.

8. **C. apiculatus** Gyll., Sch. Curc. iv, 121.

Florida; Messrs. Hubbard and Schwarz. Very distinct by the prothorax suddenly and strongly constricted near the tip, and by the erect, stout bristles, or spines which are sparsely placed upon the prothorax, and upon the alternate interspaces of the elytra. Length 3.7 mm.; .15 inch.

A—b**.

The body is elongate-oval, as in the last division, from which this differs chiefly by the prothorax being feebly constricted near the tip.

The beak is more slender towards the tip, and not flattened, about as long as the prothorax and moderately curved; the antennæ are less slender, though the second joint of the funicle is as long as the first; the club is oval, annulated. Prothorax wider than long, narrowed in front from the base, moderately rounded on the sides, feebly constricted near the tip, with distinct postocular lobes; disc strongly carinate; base truncate each side: middle lobe acute, very distinct; scutellum indistinct. Elytra very little wider than the prothorax at base; humeri rounded, not very prominent; sides subsinuate, then narrowed to the tip; alternate intervals feebly convex, with tufts of erect bristles. Thighs sinuate beneath near the tip, armed with two distinct teeth; tibiæ slightly curved; very distinctly mucronate; tarsi as in most of the other species.

9. **C. tristis**, n. sp.

Elongate-oval, densely clothed with dark gray scales, with intermixed short erect bristles, which on the elytra are arranged in tufts upon the alternate interspaces. Beak more slender at tip, punctured. Prothorax deeply and densely punctured, strongly carinate, formed as above described. Elytra indistinctly variegated on the ground color, tufts of bristles darker. Beneath clothed with dirt colored scales, densely punctured. Length 5 mm.; .20 inch.

Middle and Western States. I have adopted Dejean's name for this species.

B.

The species of this division differ from all those above mentioned by the elytra more oblong in form, and by the joints of the funicle of the antennæ 3–7 being equal in length, and gradually wider; the second joint is either nearly as long as the first (*oblongus*), or very distinctly shorter; the club is small, rounded-oval, distinctly annulated. The prothorax is rounded on the sides, a little wider than long, narrowed in front, not strongly constricted, with the postocular lobes feeble; the disc is not carinate. Scutellum variable; elytra wider at base than the prothorax, with the humeri rounded, not prominent, sides parallel, then obliquely rounded to the tip; interspaces somewhat convex, nearly equal. Legs slender, thighs armed with a distinct tooth in one species, which is obsolete in the other; tibiæ nearly straight.

Second joint of funicle scarcely shorter than first; body mottled with gray and brown scales...............	**10. oblongus.**
Second joint of funicle much shorter than first; elytra with alternate interspaces tessellated....................	**11. ferratus.**

10. **C. oblongus**, n. sp.

Oblong elongate, black, thickly clothed with brown and gray scales irregularly intermixed; back of head, and some indistinct lines upon prothorax pale. Beak as long as prothorax, rather more slender than usual, naked, dark-brown, punctured. Antennæ brown; second joint of funicle nearly as long as the first, 3–7 equal in length, gradually broader and rounded. Prothorax wider than long, deeply and densely punctured, not carinate, narrowed from the base, rounded on the sides, moderately constricted near the tip, base each side truncate, median lobe distinct. Scutellum very distinct, clothed with brown scales. Elytra one-fourth wider than the prothorax, humeri rounded, not prominent; sides parallel, scarcely perceptibly sinuate, then obliquely rounded to the tip; striæ composed of approximate punctures, fifth with a narrow blackish spot behind the middle, interspaces convex, equal. Thighs with a distinct obtuse tooth, and front pair with an additional small denticle; beneath coarsely and densely punctured, thinly clothed with large, pale scales. Length 6 mm.; .23 inch.

Georgia and Texas, two specimens. There are no bristles intermixed with the scales.

11. **C. ferratus** Say, Curc. 28: ed. Lec. i. 296; Boh., Sch. Curc. iv. 143.

Middle, Southern and Western States. Easily known by the small size, stout funicle, and alternate elytral interspaces ornamented with pale spots. The scales are intermixed with very short bristles. Say has described the elytra as striate, without punctures, but the description of Boheman is quite correct; the striæ are as strongly punctured as is usual in the genus, and when the scales are removed, are seen to be quite deep, with convex interspaces. Length 3.2 mm.; .125 inch.

ZASCELIS n. g.

The species of this genus are rather elongate and depressed, coarsely sculptured, pubescent, and sometimes also scaly. The beak is long, slender, slightly curved, cylindrical, and extends almost to the metasternum. The antennæ vary with the species, the club being sericeous, elongate in one species, and scarcely annulated, while in the others it is oval and annulated. The ventral sutures are deep, and the first is slightly sinuate; the first ventral segment is longer than the second, which is equal to the third; fourth and fifth are also equal in length. The mesosternum is elongate, and deeply excavated almost to the base. The thighs are rather stout, armed beneath with a small tooth, tibiæ broad, compressed, with a row of teeth along the outer margin of the middle and hind pairs, which becomes indistinct in some species.

This genus seems to be allied to *Cnemargus* and *Enteles*, but differs (according to description) by the toothed tibiæ; this character is an extremely rare one in *Curculionidæ*, and I find it mentioned by Lacordaire only in one instance: in *Cnemidophorus* which is allied to *Magdalis*.

The species may be distinguished as follows:

A. Pubescence long, not mixed with scales:
    Tibiæ very coarsely toothed.................... **1. serripes.**
B. Pubescence shorter: tibiæ feebly toothed:
    Pubescence erect, intermixed with large scales.. **2. squamigera.**
    Pubescence prostrate, squamiform............. **3. irrorata.**

1. **Z. serripes**, n. sp.

Oblong oval, black, clothed with coarse, erect, brown hairs; beak densely punctured, substriate near the base, frontal puncture distinct; head punctured. Prothorax wider than long, narrowed in front from the middle, rounded on the sides, scarcely constricted at tip, which is nearly truncate, postocular lobes feeble; disc densely and coarsely punctured, obsoletely carinate. Scutellum very small. Elytra but little wider than the prothorax, truncate at base, rounded behind the humeri, which are closely applied to the base of the prothorax; striæ deep, coarsely and distinctly punctured, interspaces narrow convex, sparsely punctured. Beneath coarsely punctured, tibiæ with a fringe of marginal bristles, and 5–7 large, prominent teeth; front tibiæ obtusely bidentate near the tip; apical hook distinct. Length 6 mm.; .23 inch.

Cape San Lucas, Lower California; Mr. Xántus. The pubescence is very like that of *Gymnetron teter*, but rather coarser. The funicle of the antennæ is slender; joints 1–2 equal in length, club small, oval-acuminate and annulated.

2. **Z. squamigera**, n. sp.

Larger and of the same form as the preceding, with the punctures coarser; the pubescence shorter, and intermixed with oval yellowish scales. Beak densely punctured, not striate at base. Prothorax more rounded on the sides, slightly narrowed behind the middle, finely carinate; elytra with the interspaces slightly carinate. Tibiæ finely serrate. Length 7.7 mm.; .30 inch.

One male, Cape San Lucas; Mr. Xántus. The funicle of the antennæ is slender, the club elongate, scarcely annulated; this form of club is probably a sexual character.

3. **Z. irrorata**, n. sp.

Elongate, black, pubescence fine, sparse, prostrate, subsquamiform and collected in spots on the elytra. Beak densely punctured, substriate at base, frontal puncture distinct, head punctured. Prothorax not wider than long, sides parallel behind, rounded and obliquely narrowed before the middle, scarcely constricted at tip, densely and coarsely punctured, with a very narrow, smooth dorsal line. Elytra but little wider than the prothorax, rounded just behind the humeri, then nearly parallel on the sides; striæ composed of large approximate quadrate punctures, interspaces narrow, punctured. Thighs armed with a small tooth; middle and hind tibiæ feebly serrate, obtusely bidentate near the tip. Body beneath coarsely punctured, sparsely clothed with pale brown scale-like hairs. Length 5–6.5 mm.; .20–.25 inch.

California, Nevada, and Colorado. In the specimens I have seen, the funicle of the antennæ is less slender than in the two preceding species; the club is oval-acuminate, small, and feebly annulated. The legs are much less coarsely punctured than in the other two species.

COELOSTERNUS Sch.

In order to avoid unnecessary multiplication of genera in a series as yet so imperfectly systematized, I refer to this genus a single species from Lower California, which is allied to *Zascelis*, but has the beak stouter and less elongated, the funicle of the antennæ stouter, the club small, oval-acuminate, and annulated. The legs are stouter, the thighs armed with an acute tooth, the tibiæ compressed, not serrate, furnished on the outer margin with a row of stiff bristles from the middle to the tip, and and rather strongly unguiculate at the inner apical angle. The second ventral segment is a little longer than the third, but not very obviously so.

1. **C. hispidulus**, n. sp.

Elongate, black, clothed with short, erect brown hairs; head and beak densely punctured, the latter feebly carinate towards the base. Prothorax a little longer than wide, broadly and regularly rounded on the sides, more narrowed in front than at base, disc rather flattened, coarsely and densely punctured, with an obsolete smooth dorsal line. Elytra elongate-oval, a little wider than the prothorax, striæ wide, irregularly coarsely punctured, four inner interspaces on each narrow, elevated, the others indistinct. Body beneath and legs very coarsely punctured. Length 5.5 mm.; .215 inch.

One specimen, Cape San Lucas, Mr. Xántus. A little more elongate than *Zascelis irrorata*, and quite easily recognized by the characters above given. The eyes are widely separated, and in repose are almost concealed.

BAROPSIS n. g.

The single species for which I propose this generic name, agrees with the two preceding genera in most characters, but differs essentially in the first ventral suture being more distinctly sinuate, and nearly obliterated at the middle, and the second ventral segment as long as the two following united. The beak is nearly as stout as in *Tyloderma*, and the eyes are approximate above; the funicle of the antennæ is slender, 7-jointed, the second joint as long as the first; the following are shorter, but not much thickened; club small, oval-acuminate, annulated. Legs not very stout, thighs feebly clavate, armed with a small acute tooth; tibiæ moderately compressed, not as wide as in the two preceding genera, not toothed, terminal hook small; there is a fringe of hair on the outer margin towards the tip, as in *Cœlosternus*.

The general appearance is that of *Tyloderma*, but the sculpture resembles that of several species of *Baris*. It is closely related to the Mexican

Mæmactes, but differs by the first ventral suture being sinuate, and less distinct at the middle.

1. **B. cribratus**, n. sp.

Black, rather shining, with very sparse and fine pubescence proceeding from the punctures. Beak as long as the prothorax, stout, not densely punctured, punctures becoming larger towards the base; head sparsely punctured. Prothorax oval, longer than wide, broadly rounded on the sides, a little narrower at tip than base, and scarcely constricted, rather flattened, very coarsely and not densely punctured. Elytra elongate-oval, humeri acute, slightly prominent forwards; striæ broad and deep, catenate with large quadrate punctures, interspaces as wide as the striæ, with a row of distinct distant punctures. Beneath very coarsely and distantly punctured, punctures of the 3–5th ventral segments smaller. Length 4 mm.; .16 inch.

Kansas and Texas; two specimens. A very distinct and easily recognized species.

Tribe XVI. ZYGOPINI.

The form of these insects is quite peculiar; the body is elongate, subrhomboidal, the first and second ventral segments long, the remaining ones short, rarely horizontal, as in the preceding genera, but forming an obliquely ascending surface. The pygidium is concealed by the elytra in our species, but is visible in some foreign genera, The eyes are large, and not concealed, even when the head is deflexed; they are closely approximate on the front, but widely distant beneath and finely granulated. The beak is long and slender, only slightly curved, and is received in a deep prosternal canal, which in some species does not extend upon the mesosternum, so that the end of the beak is free, as in *Conotrachelus*; even when, as in others, the mesosternum is excavated, the canal is open and not sharply limited behind. Legs slender, front coxæ elongated, and prolonged into a point on the inner side, claws simple, divergent.

Our species are of small size, and represent three genera:

Mesosternum declivous.................................. 2.
" excavated.................................. PIAZURUS.
2. Ventral surface obliquely ascending.................. COPTURUS.
" " nearly horizontal.................... ACOPTUS.

PIAZURUS Sch.

I refer to this genus three small species which differ from *Copturus* not only by the excavated mesosternum, but by the thighs being armed beneath with a small but distinct tooth. The scales are smaller than in *Copturus*, and some of them are elongate. The elytra in well preserved specimens are marked with a sutural common white spot behind the middle, though in *P. subfasciatus* this spot is much less conspicuous.

Prothorax about as long as wide; elytral white spot
conspicuous;
Elytra but little wider than prothorax..... 1. **californicus.**
Elytra much wider than prothorax......... 2. **oculatus.**
Prothorax conspicuously wider than long. Elytra
much wider than prothorax.................... 3. **subfasciatus.**

1. **P. californicus**, n. sp.

Elongate-oval, black, above irregularly clothed with narrow fulvous scales, mixed at the sides of the prothorax with white; scutellum black; elytra with a common sutural spot behind the middle, extending to the second stria, and a few scattered dots white. Beak rather stout, finely punctured, feebly carinate near the base; front very narrow; eyes bordered behind with pale scales. Prothorax not wider than long, gradually narrowed from base to tip, sides straight; disc coarsely densely punctured, distinctly carinate. Elytra very little wider than the prothorax, elongate, humeri oblique, striæ well impressed, interspaces flat, finely punctured. Beneath clothed with dirty gray scales; thighs distinctly toothed, hind pair with a black ring; tibiæ with a small terminal hook; ungues very small. Length 3 mm.; .12 inch.

Calaveras, California; Mr. Crotch. More elongate than the other two species, and resembling in form *Copturus operculatus*, though smaller.

2. **P. oculatus.** *Cryptorhynchus ocul.* Say, Journ. Ac. Nat. Sc. iii, 308; ed. lec. ii, 172; *Copturus nanus*‡ Dej. Cat.

Southern and Western States. The sutural white spot is small and extends only to the first stria. The upper surface is thinly clothed with fulvous hair-like scales, and only slightly mottled. The prothorax is nearly as long as wide, slightly rounded on the sides. The elytra are suddenly one-third wider than the prothorax and narrowed behind. Length 3 mm.; .12 inch.

3. **P. subfasciatus**, n. sp.

Rather stout in form, black, thinly and irregularly clothed with fine white hair-like scales, forming transverse bands on the elytra; the white spot is therefore not very conspicuous. Beak brown, outer half nearly smooth, base punctured and striate; antennæ testaceous, front very narrow. Prothorax about twice as wide as long, narrowed gradually from the base, sides feebly rounded behind, and very slightly sinuate near the tip; very coarsely and densely punctured, not carinate; the white scales are thinly placed, and form three broad vittæ. Elytra near the base about one-third wider than the prothorax, humeri more rounded and less prominent than in *P. oculatus*; narrowed behind, striæ wide, deep, punctured, interspaces narrow, with lines of white pubescence, so interrupted as to produce three transverse bands; one basal, surrounding a humeral dark spot, one behind the middle, and one near the tip; these bands are also connected along the suture, and at other places. Beneath thinly clothed with gray scales, thighs acutely toothed, hind pair with an indistinct dark band. Length 1.7 mm.; .07 inch.

New York, one specimen; Mr. Guex. A peculiar species, somewhat suggestive of *Ceutorhynchus.* The elytral striæ are so wide and deep, that the pattern which is formed by white hairs on the interspaces seems to be made up of sets of very fine white lines.

COPTURUS Sch.

The species belonging to our fauna are small and elongate, with the elytra only a little wider than the prothorax. They differ from the typical species of tropical America by the femora being not armed with a tooth. We have seen already in many genera that this character is quite unimportant, and I consider it unworthy of even subgeneric distinction.

Our species may be thus tabulated:

	Second joint of funicle longer than third	2.
	“ “ not “ “	10.
2.	Front moderately narrow	3.
	“ very narrow, linear	9.
3.	Mottling of upper surface not very distinct	4.
	“ “ “ very conspicuous	5.
4.	Larger, less densely clothed with scales	**1. operculatus.**
	Smaller, more “ “ “ “	**2. nanulus.**
5.	Elytra with white markings	6.
	“ each with a large dark spot	**7. binotatus.**
6.	Prothorax coarsely punctured	7.
	“ finely punctured	**6. longulus.**
7.	Body more slender	8.
	Body rather stout; each elytron with a conical process at tip	**3. mammillatus.**
8.	Prothorax less narrowed in front	**4. adspersus.***
	“ less elongate, more suddenly narrowed in front	**5. quercus.**
9.	Elytra with fulvous scales and an oblique, dark, curved band	**8. lunatus.**
10.	Very small, elytra brown with white markings	**9. minutus.**

1. **C. operculatus** Gyll., Sch. Curc. iv, 648; *Cryptorhynchus operc.* Say, Journ. Ac. Nat. Sc. Phila. iii, 308; ed. Lec. ii, 172.

Western and Southern States. The typical form is of larger size (4 mm.; .16 inch) than our other species, with the scales not very dense upon the elytra, so that the striæ are plainly seen; the spots of paler scales are few, and not conspicuous.

2. **C. nanulus**, n. sp.

This species agrees with the preceding in form, color and sculpture, but is very much smaller, the prothorax seems a little more elongate, and the sides are slightly rounded near the base; the scales of the elytra are comparatively larger and denser, and there is no distinct pattern of paler spots. Length 2.3 mm.; .09 inch.

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* I have some doubts as to the specific difference between *C. quercus* and *adspersus*, but for the present it seems more prudent to consider them as distinct.

Georgia, Illinois and Texas. The paler scales in well-preserved individuals are condensed so as to give the appearance of three vittæ on the prothorax, and to leave two faint dark clouds on each elytron, one about the middle, the other near the tip, separated by a sutural line and limited by pale bands.

3. **C. mammillatus**, n. sp.

As large as the largest specimens of *C. operculatus*, but distinctly broader; black, clothed with large oval scales of a light and dark brown color. Beak densely punctured, subcarinate; front half as wide as the beak. Prothorax not wider than long, sides feebly rounded, narrowed near the tip, and rather strongly constricted; coarsely and densely punctured, with a large subquadrate spot of white scales at the hind angles. Elytra slightly rounded on the sides, suddenly sinuate near the tip, and then broadly rounded; the tips are separately thickened and produced into a stout, conical, ascending process; the striæ are punctured as usual, and the interspaces feebly convex; the color is mottled, pale and dark brown and white. Beneath the metasternum and first and second ventral segments are covered with pale scales, the rest darker; second ventral with two tubercles near the posterior margin, about as distant from each other as from the side. Length 4.1 mm.; .16 inch.

Southern California; one specimen collected by Mr. Hardy, and kindly given me by Dr. David Sharp. The white spots of the elytra are as follows : a small dot at the base of the sixth interspace; a transverse spot on the second and third interspaces, one-fourth from the base; immediately behind this spot is a large, dark space; a smaller transverse spot behind the middle; a large lateral spot opposite the first ventral segment, and an adjoining small spot on the seventh interspace; the apical edge is also clothed with whitish scales.

4. **C. adspersus**, n. sp.

Elongate, black, beneath densely clothed with dirty white scales, above with ochreous scales, varied with dark brown and white spots. Head and front as in *C. operculatus*; antennæ pale testaceous, second joint of funicle longer than the third. Prothorax longer than wide, narrowed and feebly constricted near the tip; surface coarsely and densely punctured, scales large, rounded, concealing the punctures, the white spots are three at the base and three at the tip, indicating thus three, more or less interrupted white vittæ. Elytra with well marked punctured striæ, and flat interspaces; white marks conspicuous, indicating an annular basal mark, composed of small spots, then a long sutural line, and two oblique, interrupted bands behind the middle. Hind thighs with an indistinct band. Length 3.3 mm.; .13 inch.

Texas; four specimens. The scales are as large as in *C. operculatus*.

A specimen from Owen's Valley, California (Dr. Horn), is much less conspicuously colored.

5. **C. quercus** Gyll., Sch. Curc. iv, 650; *Zygops quercus* Say, Curc. 20; ed. Lec. i, 286.

Middle States; two specimens. The antennæ in this species are dark or piceous; the scales are smaller than in *C. operculatus.* The prothorax is less elongate, and is rather suddenly narrowed near the tip; it is coarsely punctured and marked with three white basal spots, the side ones being larger. The elytral pattern seems to be the same as in *C. adspersus,* but is partly abraded in my specimens, and it apparently differs from that species chiefly by the darker antennæ and less elongate prothorax.

6. **C. longulus,** n. sp.

Elongate, brown, beneath densely clothed with white scales, head and base of beak also densely clothed with white scales; front narrower than in *C. operculatus*; beak rather stout, black, nearly smooth; antennæ pale testaceous, second joint of funicle longer than third. Prothorax evidently longer than wide, scarcely narrowed in front, feebly constricted near the tip, rather finely granulato-punctate, with three small basal, and two discoidal spots of white scales. Elytra densely clothed with brown scales and a pattern of white markings, consisting of an irregular oblique band from the humerus to the middle, and a less oblique one behind the middle, united with the former at the suture; there are also scattered dots of white scales. Legs banded and speckled with brown. Length 2.3 mm., .09 inch.

California (Geysers), and Utah; Canada, Pettit. The scales of this are much smaller than in the preceding and following species.

7. **C. binotatus,** n. sp.

Black, densely clothed with dark gray scales, which are small on the prothorax, and large on the elytra, upon each of which is a very large subquadrate, blackish brown spot. Head and base of beak clothed with scales; beak and antennæ black; front narrower than in *C. operculatus.* Prothorax scarcely longer than wide, slightly narrowed in front, very feebly constricted near the tip, densely and deeply punctured, punctures concealed by small rounded gray scales. Elytra with deep punctured striæ and somewhat convex interspaces, densely covered with larger rounded gray scales; each with a large spot, covered with dark brown scales, occupying nearly the middle third of the surface, and extending from the first or second stria to the eighth. Length 2.5 mm.; .10 inch.

Pennsylvania and Texas; two specimens.

8. **C. lunatus,** n. sp.

Blackish brown, head and base of beak clothed with white, hair-like scales, beak more slender than usual, smooth, front very narrow, linear; antennæ nearly black, second joint of funicle longer than third. Prothorax longer than wide, slightly and gradually narrowed in front, sides scarcely rounded;

coarsely and densely punctured, clothed with large brown scales, and sprinkled with paler, with two large basal spots of dirty white. Elytra with deep punctured striæ, clothed with yellow and gray scales, with a curved band, extending from the humeri to behind the middle, then curving forwards and meeting the suture at the middle, thus forming on each an oblique lunule of dark brown. Beneath densely clothed with large, yellowish and grayish scales, legs slightly speckled with dark; thighs as in the other species, unarmed. Length 2.5 mm.; .10 inch.

California; one specimen, collected by W. H. Pease, probably at San Francisco.

9. **C. minutus.** *Ecoptus minutus* Lec., Ann. Lyc. Nat. New York, i, 171, pl. 11, fig. 8.

Easily known by the small size and different style of coloration, which is well represented in the figure given by my father, as above cited.

The beak, antennæ, legs and elytra are reddish brown, the latter with deep striæ, and lines of white narrow scales, forming a broad basal band, an oblique band behind the middle, and a narrow apical margin; the suture is also white, but interrupted about the middle. Beneath and legs rather thinly clothed with narrow white scales. The head and prothorax are darker than the elytra, the latter is deeply punctured, with a lateral vitta and a small ante-scutellar spot of white scales. The eyes are very large, the front extremely narrow. Length 2 mm.; .08 inch.

Southern States. Differs from all the preceding by the second joint of the funicle of the antennæ not longer then the third.

ACOPTUS n. g.

This genus differs from *Copturus* by the ventral surface being nearly horizontal, the segments much less unequal, and the sutures nearly straight, as in *Zygops*. It is essentially different from that genus by only the first joint of the funicle of the antennæ being elongated, and by the pygidium being covered by the elytra. The mesosternum is long, flat, and slightly declivous.

The second, third and fourth ventral segments are nearly equal, and the fifth is slightly longer, and broadly impressed in the specimen examined.

1. **A. suturalis**, n. sp.

Elongate, subcylindrical, black, sprinkled with small whitish scales, forming two very indefinite bands upon the elytra. Beak as long as the prothorax, cylindrical, curved, punctured, slightly carinate behind, without scales, except at the base; eyes very large, front extremely narrow, linear; head clothed with scales. Prothorax wider than long, slightly rounded on the sides, narrowed in front, where it is broadly constricted; densely punctured; dorsal line elevated, reaching neither base nor tip. Elytra a little wider than the prothorax, impressed near the base; striæ deep, interspaces flat, densely punctured; scales scattered, more condensed in two transverse bands, in front and behind the middle; scutellum and sutural line as far as one-fourth the length, densely clothed with white scales; legs slender, sparsely clothed with scales; thighs feebly toothed, the hind pair more distinctly; antennæ black, rather stout, first joint only of funicle elongated. Length 3.8 mm.; .15 inch.

New York; several specimens in Mr. Ulke's collection, of which he has kindly given me one.

Tribe XVII. TACHYGONINI.

This tribe contains a few small species, which in form and characters are among the strangest insects of the family. The body is broadly ovate, rather depressed above, and ornamented with tufts of hair; the prothorax is comparatively small, much narrowed in front. The head is small, the eyes large, and the front very narrow, as in *Zygopini;* the beak is rather short and stout, as in certain *Ceutorhynchini*, and retracted upon the prosternum, but the antennæ are straight, inserted near the base of the beak, not geniculate, and the first joint (scape), is no longer than the second; this is followed by five short joints, gradually increasing in width; the club is elongate-oval, distinctly annulated. The front coxæ are sub-conical, prominent and widely separated, so as to leave a space in which the beak rests when retracted. The middle coxæ are about three times more separated than the front coxæ, and the mesosternum is very short, transverse, and perpendicular to the general surface of the metasternum, which is still wider. The side pieces of the mesosternum are large and distinct, those of the metasternum are narrow. The hind coxæ are oval, more widely separated than in any other tribe known to me, and near the side margin of the elytra. The first and second ventral segments are very large and connate; the third and fourth very short; the fifth is nearly as long as the second, rounded behind. The pygidium is exposed, and suddenly declivous at tip, presenting the appearance of an anal segment in both sexes. The front and middle legs are slender and moderate in length, the tibiæ armed with a terminal hook; the third joint of the tarsi is very widely dilated, the fourth joint as long as the first, with divaricate and appendiculate ungues. The hind legs are much longer and stouter, so as to clasp the leaves upon which the insect rests.

The geographical distribution is remarkable; a few species of *Tachygonus* in America; one species of *Dinorhopala* in Birmah. This fact, and the extraordinary characters above detailed, indicate the preservation of an ancient form, which, although having the affinities I have mentioned, is equally out of place in any position in a linear arrangement.

TACHYGONUS Sch.

The characters of this genus are sufficiently exposed in the description of the tribe. Our species are four, which may be thus distinguished:

A. Hind thighs armed with several long, acute spinules or teeth; hind tibiæ flattened and curved, feebly toothed on outer margin.

Pubescence gray-brown and black, tufted..........	1. **Lecontei.**
B. Hind thighs less strongly toothed, hind tibiæ slender.	
Black, thinly pubescent with stiff, erect hair; a white sutural spot near the middle..............	2. **centralis.**
Pale brown, varied with dusky, elytra with four black spots, pubescent with erect hair, and with a central white sutural spot; hind legs dark.......	3. **tardipes.**
Smaller, brown, varied with dusky; elytra with a more elongate white sutural spot; hind legs brown...	4. **fulvipes.**

1. T. **Lecontei** Gyll., Sch. Curc. i, 312; Sturm, Cat. 1843, 352; pl. 6, f. 1; Zimm., Germ. Zeitschr. ii, 455, (habits); *T. horridus* Chevr., Guer. Icon. Règne An. 155, pl. 38, f. 9.

Maryland, southward to Texas; found on the leaves of young oaks, on the under surface of which the insect sits, and falls to the ground when approached, as observed by Zimmermann. The hind legs, though long and powerful, are not saltatorial, as, indeed, is evident from their form and position; but being widely separated. and capable of lateral extension, they give to the insect a grasping power which is very great in proportion to its small size. The curious movements in which, when about to alight it turns itself back downwards, and seizes the leaf with the elongated curved hind legs, are very well described by Zimmermann, in the passage above cited.

2. T. **centralis** Lec., Trans. Am. Ent. Soc. ii, 55.

Raton Mountain, Colorado, on *Rhus aromaticum*. The hind thighs are rather serrulate than toothed, the hind tibiæ are straight, not flattened. The color is uniform black, the elytral striæ are somewhat con fused, and the white spot is very small.

3. T. **tardipes,** n. sp.

Pale brown, head, middle of prothorax, body beneath, hind legs in part, scutellum, and four large spots on the elytra, blackish. Body above thinly clothed with long, erect, gray hairs; prothorax not densely punctured, with a tuft of fine, soft, whitish hair at the basal angles. Elytra with rows of deep subquadrate punctures, interspaces narrow convex; with an angulated sutural spot in front of the middle, of soft, white hair, and a few scattered small tufts of the same; each elytron with a large, dusky spot on the humerus, and a smaller round one near the tip. Beneath strongly punctured, pubescent with erect hair, sides of trunk with a line of soft, whitish hair. Length 2.3 mm.; .09 inch.

Texas; one specimen given me by Mr. W. Jülich; one also in the collection of Dr. Horn. The hind thighs are blackish, finely subserrate beneath; the hind tibiæ are longer than the tarsi, pale towards the tip, not flattened, slightly curved, finely subserrate on the outer side; tarsi brown.

4. T. **fulvipes,** n. sp.

Brown, feet uniform reddish testaceous. Body above thinly clothed with long, erect, gray hairs; prothorax sparsely and coarsely punctured, with a tuft of white hair at the basal angles. Elytra with regular striæ composed of large punctures; interspaces narrower than in *T. tardipes;* an elongate sutural spot of white hair in front of the middle. Hind thighs with about four small teeth on the under side; hind tibiæ comparatively shorter than in *T. tardipes*, not serrate on the outer edge. Length 1.8 mm.; .07 inch.

Illinois; Dr. Horn. Smaller than the smallest *T. centralis*, with the rows of elytral punctures more regular, and the white spot more elongated.

Tribe XVIII. **CEUTORHYNCHINI.**

This numerous tribe consists of small species of broad form, with the beak and pectoral groove varying according to genus. They are distinguished from all the preceding tribes with distant front coxæ, by the pygidium being perpendicularly deflexed, and marked with a deep excavation (*Mononychus*), or with a continuation of the acute lateral margin of the ventral segments, against which the apical margin of the elytra rests. In the latter case, the upper part of the dorsal segment is finely carinate; in both cases, the anal segment of the ♂ extends in front of the excavation or transverse line. In all the genera the coriaceous sutural margin of the left elytron is much wider than in any genera of the Cryptorhynchoid series, including *Zygopini.*

The antennæ are geniculate as usual, inserted about the middle of the beak; the funicle is 6–7-jointed, and the club oval-pointed, pubescent and annulated. The side pieces of the mesosternum are usually visible from above.

They may be divided into four groups, the first of which indicates more properly a sub-tribe.

A. Pygidium without transverse line for reception of tip of elytra; pectoral groove extending upon the metasternum..................................	**Mononychi.**
B. Pygidium with line for reception of tip of elytra, and carinate in front of the line:	
Pectoral groove, extending behind the prosternum..	**Cœliodes.**
Pectoral groove anterior, sometimes effaced.	
Beak long and slender...........................	**Ceutorhynchi.**
Beak stout, usually short......................	**Phytobii.**

Group I. **Mononychi.**

A single genus constitutes this tribe. The species are of broad form, and larger than any others in the tribe, and are easily distinguished by the pygidium not being carinate in front, and with no transverse line for the reception of the tip of the elytra; the declivous exposed portion is, however, gibbous at the upper part, surrounded with an impression, distinctly margined in the male; in the female there is a small, very deep excavation, surrounded by a thickened margin. The eyes are partially covered when the head is deflexed, and the beak, which is long and cylindrical, rests in a deep groove extending through the pro- and mesosternum, into the metasternum, where it is sharply limited. The side pieces of the meso- and metasternum are very large. The ventral sutures are curved at the sides; the first segment is as long as the metasternum, the second is shorter, third and fourth together equal to the second; fifth nearly as long as the first, truncate and impressed in the male. Legs slender, thighs slightly clubbed, tibiæ obliquely fringed at the tip, terminal hook very small at the inner angle. Tarsi with the third joint very broad, bilobed; fourth joint small, with a single claw.

MONONYCHUS Germ.

The genus is sufficiently defined by the characters of the group. One species occurs in our fauna; otherwise it is represented by six species in Europe, Northern Asia, and one in the Canary Islands.

1. **M. vulpeculus** Boh., Sch. Curc. iv, 309; *Rhynchænus vulp.* Fabr., Syst. El. ii, 450; Oliv., Ent. v, No. 83, 129, pl. 29, f. 437; Say, Curc. 20; ed. Lec. i, 286 (habits).

Canada to Georgia, on Iris. Say states that it also occurs on the flowers of *Ceanothus americanus*, and *Verbascum thapsus* in July.

Group II. **Cœliodes.**

In the species of this group the eyes are partially covered by postocular lobes, when the head is deflexed, and the pectoral groove extends into or beyond the mesosternum, the beak is long and cylindrical. The side pieces of the meso- and metasternum are large and wide. The ventral sutures are curved, and the first is as deeply impressed as the others; the second segment is shorter than the first; third and fourth still shorter, fifth nearly as long as the first. The pygidium is perpendicularly deflexed, marked with an elevated angulated line for the reception of the tips of the elytra, in front of which it is carinated. The third joint of the tarsi is very broad and bilobed, the fourth is as long as the first, with two claws, which are cleft, or toothed.

The following genera are represented in our fauna:

	Tibiæ flattened, toothed on the outer side.........	2.
	" slender, not dilated nor grooved............	3.
2.	Pectoral groove extending to the metasternum....	CRAPONIUS.
	" " not extending to the metasternum	CNEMOGONUS.
3.	Body broadly ovate, elytra suddenly wider.......	CŒLIODES.
	" pyriform, elytra gradually wider...........	ACALLODES.

CRAPONIUS n. g.

A single species which differs remarkably from *Cœliodes* by the tibiæ being flattened, dilated, angulated on the outer margin near the base, and broadly grooved externally for the partial reception of the tarsi. It has, in addition, the pectoral groove prolonged to the posterior margin of the metasternum. The funicle of the antennæ is slender, and consists of seven joints, of which the second is as long as the three following. The claws are armed with an acute tooth, half as long as the claw.

1. **C. inæqualis.** *Ceutorhynchus inæq.* Say, Curc. 20; ed. Lec. i, 286.

Middle, Southern and Western States. Easily known by the broad form and dark color; the prothorax has four large tubercles, of which the outer ones are acute; the dorsal canal is prolonged to the apical margin, which is slightly emarginated thereby. The alternate interspaces of the elytra are more elevated and somewhat uneven, as in certain *Conotracheli.* Length 2.7 mm.; .11 inch.

CNEMOGONUS n. g.

The tibiæ of one species are so different from those of the other *Cœliodes,* that I am obliged to regard it as a separate genus. They are, namely, much flattened and dilated externally, so as to form a large angle near the knee. The outer apical angle of the front tibiæ is prolonged in a toothed process, as in *Cœliodes,* and the other tibiæ are obliquely truncate and fringed externally. In other respects this genus agrees with *Cœliodes;* the pectoral groove is not prolonged into the metasternum, as in *Craponius,* nor are the tibiæ grooved externally for the reception of the tarsi. The thighs are not toothed, and the claws are armed with a short tooth, not cleft, as in *Cœliodes.*

C. epilobii. *Curc. epilobii* Payk., Faun. Suec. iii, 259; *Rhynchænus ep.* Gyll., &c.; *Cœliodes ep.* Gyll., Sch. Curc. iv, 288, &c.

Widely diffused in Europe, from Scandinavia to Austria. I have a specimen from Great Slave Lake, and one from British Columbia, which seem to be the same. Apart from the generic characters above given, this species is easily known by the interspaces of the elytra, rough with small acute tubercles; near the base there is a small cruciform white spot, formed by the junction of a short sutural line with a transverse one, which extends to the third stria. Length 3.2 mm.; .125 inch.

CŒLIODES Sch.

In this genus the tibiæ are slender, not flattened nor toothed on the outer margin, but the front pair, in some species, are prolonged at the outer apical angle into a short process, which is toothed on the lower edge. The pectoral groove extends as far as, but not upon, the metasternum. The claws are nearly cleft, the inner parts being almost contiguous, as in most species of *Anthonomus.*

A. Front tibiæ prolonged outwards at tip: thighs unarmed.
  Interspaces of elytra convex........................ 1. **curtus.**
  Interspaces of elytra flat............................ 2. **acephalus.**
B. Front tibiæ not prolonged at tip: thighs unarmed.
  Elytra with rows of acute tubercles................ 2.

Elytra not tuberculate; or only feebly muricate towards the tip.................................. **3.**

2. Black, thinly pubescent; elytra with a white basal spot...................................... **3. tenuipes.**

Brown, mottled with white hair.................. **4. asper.**

3. Tibiæ slender, not angulated........................ **4.**

" with parallel sides, subangulated near the base **5. cruralis.**

4. Apical teeth of prothorax distinct.................. **6. nebulosus.**

" " " wanting.................. **7. nasalis.**

C. Thighs armed with a tooth....... .... **8. flavicaudis.**

1. **C. curtus** Gyll., Sch. Curc. iv, 287; *Ceutorhynchus curt.* Say, Curc. 29. ed. Lec. i, 298.

Southern States; two specimens.

2. **C. acephalus** Germ., Sch. Curc. iv, 289; *Falciger aceph.* Say, Journ. Ac. Nat. Sc. Phila. iii, 309; ed. Lec. i, 173; *C. subulirostris* Gyll., Sch. Curc. iv, 288; *C. leprosus* Boheman, Sch. Curc. viii, 1, 394.

Middle and Western States. The scales are sometimes mottled, sometimes nearly uniform in color. The beak is cylindrical in ♂, narrowed towards the tip in ♀.

3. **C. tenuipes,** n. sp.

Black, thinly clothed with fine depressed hair-like scales. Beak punctured, carinate. Prothorax very coarsely punctured, dorsal channel deep towards the base, lateral tubercle small but acute. Elytra with the striæ wide, deep and punctured; interspaces hardly wider than the striæ, rough with small acute tubercles; base with a common whitish spot at the scutellar region. Legs slender, thighs unarmed, tibiæ slightly curved; front pair without apical process. Claws cleft as usual. Length 2.5 mm.; .10 inch.

Texas, Belfrage; one ♂. Greatly resembles in appearance a *Ceutorhynchus*, but the beak is less slender, and the mesosternum is deeply concave.

4. **C. asper,** n. sp.

Brown, mottled with coarse white scale-like hairs. Beak rather stout, coarsely punctured, flattened above, feebly carinate. Prothorax coarsely punctured, dorsal channel obsolete, lateral tubercles small, acute. Elytra deeply striate, interspaces wider than the striæ, convex, each with a row of large, distant, acute tubercles; tibiæ slender, slightly curved, front pair with a very small spine directed outwards, at the external apical angle. Length 2.2 mm,; .085 inch.

Texas, Belfrage. The white mottlings of the elytra do not form a distinct pattern, there is, however, a tendency to transverse bands, and a cruciform spot near the base.

5. **C. cruralis,** n. sp.

Black, thinly and irregularly mottled with white, scale-like hairs. Beak slender, punctured, substriate near the base, finely carinate. Prothorax very coarsely punctured, dorsal channel broad, not deep, lateral tubercles acute. Elytra deeply striate, interspaces convex, wider than the striæ, not tuberculate; there is a distinct cruciform white spot near the base. Tibiæ slender, straight, with parallel sides from near the knee to the tip; front pair without spine at the outer apical angle. Length 2.2 mm.; .085 inch.

Anticosti, Mr. W. Couper, abundant; Lake Superior, Pennsylvania and Texas. Easily known by the peculiar form of the tibiæ, the external margin of which is obtusely angulated near the knee, but not at all dilated, nor grooved.

6. **C. nebulosus**, n. sp.

Broadly ovate, very dark brown. Beak stout and long, punctured, not carinate, scarcely striate towards the base. Prothorax coarsely punctured, broader than long, strongly narrowed in front; dorsal channel not deep, apical tubercles acute, not very distant, lateral tubercles acute, prominent. Elytra indistinctly mottled with very fine brown pubescence, and very small, white scales, not forming a definite pattern; striæ deep, punctured, interspaces rugose, very finely muricate towards the tip. Thighs not toothed, tibiæ slender, nearly straight. Length 2 mm.; .08 inch.

Detroit, Michigan; Messrs. Hubbard and Schwarz. I have three larger specimens, from Georgia and Pennsylvania, which I refer to this species, though they are of a darker color, and the white spots of the elytra are more distinct.

7. **C. nasalis**, n. sp.

Black, pruinose with a thin clothing of very fine white hair. Beak rather stout, coarsely punctured, flattened above, with three distinct carinæ. Prothorax coarsely punctured, dorsal channel deep behind, obsolete in front, lateral tubercles small, acute. Elytra with broad deep striæ, interspaces hardly wider than the striæ, flat; suture with a short line of white scales extending from the base for one-fourth the length. Tibiæ slender, slightly curved, front pair without spine at outer apical angle. Length 3.5 mm.; .14 inch.

Texas, Belfrage, one ♂. In this, as in *C. tenuipes*, *asper* and *cruralis* the postocular lobes of the prothorax are indistinct, and the front margin is nearly straight as far as the prosternum, which in the other species is deeply emarginate in front.

8. **C. flavicaudis** Boh., Sch. Curc. viii, 1, 397.

Unknown to me. The thighs are described as having a short, obtuse tooth beneath. This character will distinguish it from those above mentioned.

ACALLODES n. g.

This new genus is established upon an insect which has the same pyriform body as the European *Scleropterus*, but differs from that genus by the funicle having seven distinct joints, of which the first is longer and thicker, and the second somewhat elongate; the others differ but little in length. The antecoxal ridges of the prosternum are very well developed, and the front coxæ are very prominent and not widely separated. The mesosternum is not properly sulcate, but the middle coxæ are large and very prominent, not widely separated, so that there is a narrow deep space between them. The metasternum is very short, and the hind coxæ widely separated. The thighs are slightly clavate, not toothed, the tibiæ are slender, the tarsi dilated, and the claws cleft. Scutellum not visible; pygidium exposed.

1. **A. ventricosus**, n. sp.

Ovate, very convex, dark brown, very finely pubescent; pubescence forming three vittæ on the prothorax and two bands on the elytra. Head strongly punctured, eyes distant, not convex, beak stout, curved, as long as the prothorax, strongly punctured, striate towards the base. Prothorax wider than long, gradually but strongly narrowed in front, rounded on the sides behind, constricted near the tip, apical margin not elevated, postocular lobes obsolete; disc very coarsely punctured, dorsal channel distinct, lateral tubercles obsolete. Elytra ventricose, gradually wider than the prothorax, obliquely narrowed behind the middle and strongly declivous, striæ very deep, punctured, interspaces not wider, convex; an elongate basal spot on the suture of white scales; space between the two bands of fine gray pubescence, darker. Beneath coarsely punctured, finely and sparsely pubescent. Legs and antennæ lighter brown. Length 2.5 mm.; .10 inch.

Middle and Western States, two specimens.

Group III. **Ceutorhynchi.**

The species of this group are small, and of the broad ovate form usual in the tribe. They differ from the preceding group by the pectoral groove not extending behind the front coxæ, and from the next group by the beak being long, slender, and curved; usually about half the length of the body. The eyes are small, not prominent, and are partially concealed in repose by broad prothoracic lobes. The prosternum is suddenly and very deeply emarginate in front, and the antecoxal ridges defining the pectoral groove are acute and elevated in all our species.

The beak is stouter and more coarsely sculptured in ♂, and the last ventral segment is impressed.* The species in our fauna are not very numerous, and all belong to *Ceutorhynchus*; some European species with 6-jointed funicle have been separated under the name *Ceutorhynchidius*, but I see nothing in our species sufficient to warrant the adoption of such a division.

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* By an unfortunate error, Suffrian (Ent. Zeitung, 1845, 102) has stated that the females have the ventral impression. Thompson, however, (Skand. Col. vii, passim), reports the sexual difference correctly.

According to the form of the claws and the number of joints of the funicle the species fall into natural groups, as follows :

A. Claws cleft.
  a. Funicle 7-jointed.......................... Sp. 1-3.
  b. Funicle 6-jointed.......................... Sp. 4.
B. Claws toothed near the base ; funicle 7-jointed.. Sp. 5-8.
C. Claws simple.
  a. Funicle 7-jointed.......................... Sp. 9-10.
  b. Funicle 6-jointed.......................... Sp. 11-18.

A-a. Claws cleft ; funicle 7-jointed ; thighs toothed.
  More finely sculptured; elytra without basal spot;
    Pubescence very fine, brown................. 1. **subpubescens.**
      " coarser, gray.................... 2. **rapæ.**
  Coarsely sculptured, elytra with white basal spot 3. **sulcipennis.**
A-b. Claws cleft, funiculus 6-jointed; thighs toothed.
  Coarsely sculptured, elytra with a white basal spot 4. **decipiens.**
B. Claws toothed at the base ; funicle 7-jointed.
  Prothorax more finely punctured............... 2.
    " very coarsely punctured, deeply sulcate 5. **rudis.**
2. Elytra without conspicuous basal spot, thighs
    not toothed................................ 3.
  Elytra with conspicuous basal spot, thighs toothed 6. **sericans.**
3. Prothorax with sides much rounded............ 7. **convexicollis.**
    " " " more oblique............. 8. **pusillus.**
C-a. Claws simple ; funicle 7-jointed.
  Brown, mottled above with fine pubescence...... 9. **pusio.**
    " spotted with large white scales.......... 10. **squamatus.**
C-b. Claws simple ; funicle 6-jointed.
  Elytra with spots of white scales............... 2.
    " " an indistinct basal spot............ 3.
2. Elytra with a narrow angulated band........... 11. **angulatus.**
    " " an oblique lateral spot............. 12. **obliquus.**
    " " basal spot and larger lateral one.... 13. **tau.**
    " with suture and lateral spot white ; red
      behind the middle........................ 14. **semirufus.**
  Elytra with broad pale sutural vitta........... 15. **medialis.**
3. Densely clothed with small appressed hair-like
    scales..................................... 16. **septentrionalis.**
  Brown, coarsely squamose....................... 17. **Zimmermanni.**
  Blackish, clothed with scale-like pubescence
    not appressed.............................. 18. **puberulus.**

A—a.

1. **C. subpubescens**, n. sp.

Oblong, narrowed in front, brownish-black, above thinly clothed with very fine brown pubescence ; beneath with small grayish scales. Head densely punctured, occiput finely carinate. Beak half as long as the body, slender, cylindrical, shining and sparsely punctured towards the tip, striate and punctured, and carinate towards the base; eyes distant, front slightly concave. Prothorax a little wider than long, gradually but strongly narrowed in front, constricted near the tip, apical margin elevated, postocular lobes large and broad; disc densely punctured, dorsal channel deep, lateral tubercles small. Elytra oblong, wider than the prothorax, striæ rather fine, interspaces broad, flat, densely and strongly rugose and granulate. Funicle of antennæ rather long, first and second joint elongated, the first stouter; joints 3–7 gradually a little broader, club moderate, oval, pointed. Thighs acutely toothed, claws cleft. Length 3.2 mm.; .125 inch.

♂. Last ventral segment with two widely separated elevations.

Los Angeles and Tejon, California; Mr. Crotch. Very similar to the next, but the pubescence of the upper surface is much finer, and not gray, but brown, and the interspaces of the elytra are much more rough.

2. **C. rapæ** Gyll., Sch. Curc. iv, 547; Redt., Fauna Austr. 805; Thoms., Skand. Col. vii, 271.

Canada, Middle and Western States; also in northern and middle Europe. The interspaces of the elytra are finely rugose, and towards the tip are sparsely muricate with elevated acute granules. The last ventral segment as in the preceding species has two distant tubercles in the male.

3. **C. sulcipennis**, n. sp.

Rather broader ovate, black, clothed beneath with small whitish scales, above very slightly pubescent. Head and beak punctured, the latter curved, not distinctly striate at the base; occiput finely carinate. Prothorax wider than long, narrowed in front, somewhat rounded on the sides, slightly constricted near the tip; apical margin slightly elevated, postocular lobes entirely wanting; disc coarsely confluently punctured, channeled, lateral tubercles distinct, acute. Elytra deeply sulcate; interspaces not wider than the striæ, rough and muricate; an elongate basal spot on the suture, composed of small white scales, sometimes removed by abrasion. Funicle slender, first joint nearly as long as the second, and stouter; third nearly as long as the second; 4–7 gradually shorter, but scarcely thicker; club moderate, oval pointed. Thighs acutely toothed, claws cleft. Length 2.5 mm.; .10 inch.

♂. Last ventral segment with a shallow circular impression. Beak stouter, densely punctured.

♀. Last ventral segment not impressed; beak longer, more slender, less densely punctured.

Southern and Western States. The mesosternum is slightly concave; indicating a pectoral groove, though without ridges. In this character, as well as by the stouter and more densely punctured beak of the ♂, it shows a tendency towards *Cœliodes*.

A—b.

4. **C. decipiens**, n. sp.

Rather elongate, black, beneath clothed with gray scales, above with a few scattered white hairs, and an elongate white sutural spot at the base of the elytra. Head densely punctured; beak (♂) half as long as the body, cylindrical, curved, strongly punctured, striate and carinate towards the base. Prothorax as long as wide, narrowed in front, sides slightly rounded behind, sinuate in front, broadly constricted near the tip, apical margin not elevated, postocular lobes very feeble, disc very coarsely punctured, channeled behind, tubercles wanting. Elytra elongate-oval, wider than the prothorax, convex, very deeply striate, interspaces not wider than the striæ, convex, rough with acute granules. Antennæ with 6-jointed funicle; first and second joint longer, the first stouter, club moderate, oval-pointed. Thighs armed with a small but acute tooth; tibiæ rather less slender than usual, claws cleft. Length 2.4 mm.; .09 inch.

♂. Last ventral segment with a transverse apical impression.

Kansas and Michigan; two ♂. This species has a singular resemblance in form and color to *Rhinoncus longulus*, but the beak and sculpture of the elytra are quite different. The generic characters seem to be very nearly those of *Rhytidisomus*, but the elytra, though rounded in form are more elongate. I infer therefore that that genus, founded upon a single European species should be suppressed.

B.

5. **C. rudis**, n. sp.

Dark brown, beneath densely clothed with rather large dirt-colored scales, above thinly pubescent with brown hair. Head densely punctured, finely carinate; beak (♀) half as long as the body, shining and sparsely punctured towards the tip, striate and punctured towards the base. Prothorax wider than long, strongly rounded on the sides, much narrowed and constricted near the tip; apical margin elevated, postocular lobes broad and feeble ; disc convex very coarsely punctured, very deeply channeled, with pale scales in the channel and at the middle of the apex; tubercles wanting. Elytra deeply striate, interspaces wider, somewhat convex, rough. Funicle rather long, 7-jointed, first and second joints longer, the first stouter; club moderate, oval pointed. Legs reddish testaceous, thighs strongly toothed, claws armed with a short, acute basal tooth. Length 2.8 mm.; .11 inch.

One badly preserved specimen; Kansas.

6. **C. sericans**, n. sp.

Oblong, depressed, dark brown, beneath densely clothed with small, gray scales, above with fine, scale-like brown hairs, with a silky lustre. Head densely punctured, feebly channeled, beak punctured and striate towards the base. Prothorax wider than long, sides nearly parallel behind, then strongly narrowed and constricted near the tip; apical margin elevated, postocular lobes large and broad; disc densely, not coarsely punctured, channeled, lateral tubercles large, obtuse. Elytra striate, interspaces flat, wide, granulate, slightly mottled with white hairs; an elongate, snow-white sutural spot extends from the base for one-third the length. Thighs toothed, claws armed with a small basal tooth. Length 2 mm.; .08 inch.

One ♂, Calaveras, California; Mr. Crotch. The last ventral segment is deeply and widely impressed. A very beautiful and easily recognized species.

7. **C. convexicollis**, n. sp.

Oblong, black, beneath clothed with gray scales, above uniformly densely covered with coarse dirt-colored pubescence. Head densely punctured, beak (♀) long, slender, slightly curved, shining; punctured towards the base. Prothorax wider than long, narrowed in front, strongly rounded on the sides, constricted near the tip, apical margin elevated, postocular lobes very feeble; disc coarsely punctured, deeply channeled. Elytra with deep punctured striæ, interspaces wide, flat, finely alutaceous. Antennæ testaceous, funicle slender, second joint longer and more slender than the first. Legs brown, thighs not toothed, claws with a long acute tooth. Length 2 mm.; .08 inch.

Texas, Belfrage, two ♀. Of the same general form as *C. rapæ*, but much smaller, and with a quite different prothorax.

9. **C. pusillus**, n. sp.

Oblong, depressed, dark brown, or ferruginous, clothed beneath with rather small gray scales, above with short rigid pubescence, mixed with similar scales. Head densely punctured, occiput finely carinate; beak slender, punctured, striate at the base. Prothorax wider than long, sides more obliquely rounded behind, suddenly narrowed and constricted in front, apical margin elevated; disc densely punctured, less deeply channeled, with a dorsal line of pale scales; posterior tubercles large, rather acute. Elytra with deep striæ, interspaces somewhat wider, slightly convex, sparsely rugose; a basal whitish spot, occupying the space from the suture to second stria. Funicle slender, 7-jointed; first and second joints longer, the first stouter; club moderate, oval pointed. Legs ferruginous, thighs not toothed, claws with an acute basal tooth. Length 2 mm.; .08 inch.

♂. Last ventral segment with a deep, round impression.

California and Oregon; not rare. Allied to *C. convexicollis;* differs chiefly by the sides of the prothorax less rounded, the dorsal channel less deep, and the lateral tubercles more acute. The whitish basal spot of the elytra is frequently indistinct; and I have indeed some specimens which have lost the scales of the upper surface, while retaining the pubescence. These present a very deceptive appearance, and look almost as if they belonged to a different species.

C—a.

9. **C. pusio** Mann., Bull. Mosc., 1852, ii, 355.

Oblong, depressed, dark brown, beneath densely clothed with small, pale scales; above mottled with fine, short, brown pubescence. Head densely punctulate, front broadly concave; beak not half as long as the body, slender, curved, nearly smooth and shining externally, punctulate and finely carinate towards the base. Prothorax wider than long, sides rounded behind, strongly narrowed and constricted near the tip; apical margin elevated, postocular lobes wanting; disc coarsely punctured, dorsal channel broad, subinterrupted, lateral tubercles large, acute. Elytra deeply striate, interspaces wider, slightly convex, sparsely and deeply rugose; scutellar region clothed with pale scales. Funicle with first and second joints elongated, first stouter; 3–7 gradually a little wider, club rather large, oval-pointed. Thighs not toothed, claws slender, not toothed. Length 2 mm.; .08 inch.

♂. Last ventral segment with a deep, round excavation.

Alaska. I owe two typical specimens to the kindness of Prof. Mæklin; it was also found by Mr. Crotch, at Clear Lake, California. In well preserved specimens, the sides of the prothorax and the dorsal channel are clothed with pale scales.

10. **C. squamatus**, n. sp.

Ovate, broad, dark piceous, depressed, beneath clothed with whitish scales, above thinly pubescent, with spots of large rounded, white scales. Head finely punctured; beak long, slender, much curved, nearly smooth towards the tip, finely striate towards the base. Prothorax wider than long, strongly narrowed in front, and constricted near the tip, apical margin elevated, ferruginous, postocular lobes wanting; disc densely punctured, dorsal channel feeble, lateral tubercles small, acute; sides and basal spot covered with white scales. Elytra with deep punctured striæ, interspaces wider, slightly convex, rugose, marked with scattered white scales; there is a large scutellar spot, and a transverse band behind the middle, densely clothed with white scales. Funicle slender; first and second joints longer, the first a little stouter, club elongate-oval, pointed. Thighs not toothed, claws slender, not toothed. Length 2 mm.; .08 inch.

♂. Last ventral segment with a deep transverse excavation.

Illinois; three specimens.

C—b.

11. **C. angulatus**, n. sp.

Oblong, depressed, brown or blackish brown, densely clothed above and beneath with small pale scales; a white, narrow, angulated band on each elytron, running from the side about one-third from the base obliquely backwards a short distance, then obliquely forwards to the scutellum. Head densely punctured, beak according to sex; front slightly concave. Prothorax wider than long, rounded on the sides, strongly narrowed and constricted in front, apical margin elevated, postocular lobes broad and distinct; disc covered with white scales at the sides, very densely punctured, dorsal channel deep, lateral tubercles acute, large. Elytra with rather shallow punctured striæ, interspaces wide, flat, densely rugose. Funicle 6-jointed, first to third joints elongate, the first stouter; club oval-pointed. Thighs with a very small obtuse tooth, claws slender, simple. Length 3 mm.; .12 inch.

♂. Last ventral segment with a deep transverse excavation; beak less than half the length of the body, stouter, densely punctured.

♀. Last ventral segment not impressed; beak half the length of the body, more slender and more curved, nearly smooth towards the tip, strongly punctured and striate towards the base.

Vancouver Island and California. Among many specimens before me, there are only a few in which the markings are perfectly preserved; in these, besides the angulated narrow band above described, the apical part of the elytra is also clothed with white scales, especially towards the suture; but these scales are less densely placed than those in the band; there is also a spot at the middle of the base of the prothorax.

12. **C. obliquus**, n. sp.

Oblong, depressed, brown, densely clothed above and beneath with pale brown scales, which are smaller above. Head and beak like the preceding. Prothorax wider than long, rounded on the sides, strongly narrowed and constricted near the tip; apical margin elevated, postocular lobes broad, distinct; disc densely and more coarsely punctured than in *C. angulatus*, deeply channeled, lateral tubercles large, acute. Elytra less broad at base, striæ rather shallow, punctured, interspaces wide, flat, strongly rugose; a lateral oblique spot of dense whitish scales extends from the ninth to the fifth stria. Other characters and sexual differences as in *C. angulatus*. Length 2.4 mm.; .09 inch.

California at San Mateo; three specimens, Mr. Crotch. Closely related to the preceding, but more elongate, and with the scales uniform in color, except the white oblique spot towards the sides of the elytra.

13. **C. tau**, n. sp.

Ovate, narrowed in front, and less so behind, depressed, blackish, densely clothed with dark gray scales, which are smaller and more fuscous above. Beak curved, slender, sparsely punctured, striate towards the base. Head densely punctured. Prothorax as in *C. angulatus*, but more obliquely rounded on the sides. Elytra less oblong, more distinctly narrowed behind, similarly striate and rugose, with a large scutellar spot like an inverted **T**, and an oblique lateral spot densely clothed with gray scales. Antennæ and legs brown, similar to those of *C. angulatus*. Length 3 mm.; .12 inch.

One specimen, Texas; Belfrage. Also closely allied to the two preceding, and differing only by form and elytral spots.

14. **C. semirufus**, n. sp.

Ovate narrowed in front, and less so behind, brown; elytra behind the middle, antennæ and legs ferruginous; beneath densely clothed with white scales; above thinly and finely pubescent, with the suture and quadrate lateral spot of elytra clothed with white scales. Head densely punctured, beak curved, punctured towards the tip, striate towards the base. Prothorax wider than long, rounded on the sides, narrowed and constricted in front, apical margin elevated; postocular lobes broad, distinct; disc strongly less densely punctured, deeply channeled, lateral tubercles acute, sides and dorsal line clothed with white scales. Elytra with punctured striæ, interspaces flat, shining, slightly punctulate. Thighs not toothed, claws slender, simple. Length 1.3 mm.; .05 inch.

Detroit, Messrs. Hubbard and Schwarz. A small species remarkable for the less pubescent upper surface, and peculiar coloration; seems related to the European *C. querceti*, but differs by the quadrate lateral white spot of the elytra.

15. **C. medialis**, n. sp.

Oblong, depressed, brown, beneath densely clothed with pale scales, above with fine brown hair-like scales. Head punctured, beak long, slender, curved, shining and nearly smooth towards the tip, punctured and substriate near the base. Prothorax wider than long, obliquely rounded on the sides, strongly narrowed and constricted near the tip, apical margin elevated, postocular lobes broad, indistinct; disc strongly punctured, dorsal channel not deep, lateral tubercles small but acute; sides and dorsal line clothed with pale scales. Elytra with punctured striæ, interspaces wider, flat, strongly rugose; sutural interspace and base of second densely clothed with pale scales; sides of elytra, especially behind the middle, less densely clothed with similar scales. Funicle 6-jointed. Thighs not toothed, claws slender, not toothed. Length 2 mm.; .08 inch.

Two specimens, Lake Superior. The beak is similar in the two specimens, but one of them, which I infer to be the ♂, has the last ventral segment very feebly impressed.

16. **C. septentrionalis** Gyll., Sch. Curc. iv, 492.

Lake Superior, Canada, and Pennsylvania; not rare. A small species, densely clothed above with depressed, scale-like pubescence, which has a feeble metallic lustre; in many specimens there is a faintly marked paler scutellar spot. The lateral tubercles of the prothorax are very small; the funicle 6-jointed; the thighs not toothed; the claws slender, not toothed. Length 2 mm.; .08 inch.

17. **C. Zimmermani** Gyll., Sch. Curc. iv, 492.

Canada to Texas. Still smaller, brown, clothed with small, pale scales above; lateral tubercles of prothorax very small; antennæ, thighs and claws, as in the preceding. The elytra and legs usually of a paler brown. Length 1.5 mm.; .06 inch.

18. **C. puberulus**, n. sp.

Oblong, depressed, blackish with a feeble metallic glimmer, beneath clothed with pale scales, above with short, coarse pubescence. Prothorax wider than long, much narrowed and constricted in front, apical margin elevated, postocular lobes broad, not distinct; densely punctured, dorsal channel distinct, not very deep, lateral tubercles small, acute. Elytra deeply striate, interspaces flat, rugose. Funicle 6-jointed; thighs and claws not toothed. Length 1.7 mm.; .07 inch.

Canada and Michigan. A little larger and darker colored than *C. Zimmermanni,* from which it differs chiefly by the upper surface being covered with scale-like hairs, or small, elongate, hair-like scales; while in the preceding most of the scales are oval.

Group IV. **Phytobii.**

The species of this group differ from the *Ceutorhynchi* only by the beak being stout, and usually short, in one instance scarcely as long as the prothorax. The prothoracic lobes are feeble or wanting, the eyes are sometimes partially covered in repose, sometimes entirely free. The pectoral groove is sometimes well defined by antecoxal ridges on the prosternum, but occasionally these are absent. The first genus exhibits a very singular reversion towards the *Bagous* group, with which it might indeed be placed, were it not that the pygidium is exposed, and similar in sculpture to that of the other members of the present tribe, and, also, that other characters correspond with the position here assigned to it.

The genera are somewhat difficult to define, in consequence of the important structural characters by which the species are distinguished. It is probable that they will be increased in future, by those whose views tend to the multiplication of genera, but for the present, I think that the divisions here adopted express both conveniently and naturally the affinities of the species known to me.

Tarsi with the third joint dilated, bilobed	2.
" slender, long, not dilated	PHYTOBIUS.
2. Prosternum with acute antecoxal ridges	3.
" without " "	PELENOMUS.
3. Eyes with acutely elevated orbits	CŒLOGASTER.
" without " "	RHINONCUS.

PHYTOBIUS Sch.

Eubrychius Thomson.

In this genus the beak is stout, cylindrical, nearly as long as the prothorax; the eyes are small, rounded, convex and fully exposed. Prothorax not much wider than the head, wider than long, slightly narrower at the tip, truncate before and behind, with a small angle at the scutellum; the disc is feebly longitudinally impressed behind the middle, and the lateral tubercles are small and indistinct. Elytra deeply striate, nearly twice as wide as the prothorax, and about three times as long, voluminous, broad at the base, gradually narrowed behind. Pygidium triangular, exposed. Legs long, slender, tibiæ nearly straight, not mucronate; tarsi not dilated, last joint as long as the others united, with rather large simple claws.

A remarkable and easily recognized genus, of which but one species is known. Schönherr divided *Phytobius* into two groups of which the first (*genuini*), was characterized by long slender tarsi. There is, therefore, no excuse for retaining the name for the second group, (*spurii*) and it must be restored to this genus afterwards named *Eubrychius* by Thomson.

1. **P. velatus** Gyll., Sch. Curc. iii, 459; *Rhynchænus vel.* Beck, Beitr. Bayersch. Ins. Fauna, 20; *Litodactylus vel.* Redt., Faun. Austr. 777; *Eubrychius vel.* Thomson, Skand. Col. vii, 232.

A specimen collected at Detroit, Michigan, by Messrs. Hubbard and Schwarz, does not differ appreciably from the detailed descriptions above cited; it is rare in northern and middle Europe, on *Potamageton* and other plants, below the surface of the water. It is a small black insect, clothed with depressed greenish yellow scales; the prothorax has two broad dark stripes; the elytra are more thinly clothed with scales, except the sutural interspace, which is densely covered. The antennæ and legs are bright yellow, with the knees dusky. Length 2 mm.; .08 inch.

PELENOMUS Thomson.

The species of this genus are easily distinguished by the short stout beak, which they have in common with *Rhinoncus* and *Cœlogaster*, being combined with prosternum somewhat emarginate in front, but without antecoxal ridges. The eyes are round, convex, without orbital ridges, and are completely exposed in repose, on account of the entire absence of the postocular lobes of the prothorax. The claws are simple and moderately large. The funicle is 6-jointed, with the first joint longer and stouter; the club is rather large, oval-pointed, annulated and acuminate. There are but three species in my collection:

A. Funicle slender, 2d and 3d joints distinctly longer.
  Prothorax broadly sulcate, apical and posterior tubercles strongly marked, acute............... 1. **sulcicollis.**
B. Funicle shorter and stouter, joints 2–3 very little longer.
  Prothorax broadly sulcate, apical tubercles more distant but acute, posterior tubercles acute......... 2. **squamosus.**
  Apical tubercles indistinct; interspaces of elytra with rows of acute tubercles.................... 3. **cavifrons.**

1. **P. sulcicollis.** *Phytobius sulc.* Fahr., Sch. Curc. vii, 346.

Lake Superior to Georgia. The second and third joints of the funicle are distinctly longer than the following ones, and the upper margin of the eye is a little prominent, showing a tendency toward the second division of *Cœlogaster*.

2. **P. squamosus,** n. sp.

Smaller than *P. sulcicollis*, black, above densely clothed with dark gray scales, slightly mottled with brown, beneath with paler scales. Beak scarcely longer than the head, stout, cylindrical, densely and finely punctured; eyes convex, prominent, head densely punctured, not impressed. Prothorax wider than long, much narrowed in front, apical tubercles acute, distant, posterior tubercles acute, rather large; dorsal channel not deep, sides and dorsal stripe with paler scales. Elytra with deep slightly punctured striæ, interspaces convex, very finely rugose. Antennæ and legs more or less testaceous; the former rather stout, with large oval club;

second joint of funicle a little longer than the third, which is about equal to the fourth. Claws simple. Length 2 mm.; .08 inch.

Two specimens, New York and Michigan; three specimens, British Columbia; Crotch. The legs are testaceous in one, piceous in the others. The prosternum is broadly emarginate in front, and slightly concave, but without antecoxal ridges; the front coxæ are not widely separated. In the preceding species the prosternum is more deeply emarginate and more concave, though the front coxæ are not more widely separated.

3. **P. cavifrons**, n. sp.

Of the same size and form as *P. sulcicollis*, densely clothed with small pale and dark scales. Beak as long as the head, stout, cylindrical, curved, densely punctured; front strongly concave between the eyes. Prothorax wider than long, much narrowed in front, and deeply transversely impressed; apical margin elevated, notched at the middle, with approximate cusps; posterior tubercles large, acute; dorsal channel distinct. Elytra with rows of small, distant, acute tubercles on the third, fifth, seventh and ninth interspaces; striæ deep; antennæ and legs more or less testaceous; funicle with the second joint scarcely longer than the third or fourth. Front coxæ not more widely separated than in the other species. Length 2.2 mm.; .09 inch.

California, at S. Buenaventura, Los Angeles, and Lake Tahoe; Mr. Crotch. Though the front is deeply concave, and the upper margin of the eyes prominent, there is no distinct orbit, such as is seen in *Cœlogaster*.

CŒLOGASTER Sch.

This genus is easily distinguished from both *Rhinoncus* and *Pelenomus* by the eyes being inserted under distinct, acute, superciliary ridges or orbits, and being partly covered in repose. There are also important differences in the sternal pieces; the prosternum is still more deeply and suddenly emarginate in front, so as to reach almost to the front coxæ, which also reach almost to the hind margin, and are more widely separated than in either of the genera just named; the ridges in front of the coxæ limiting the pectoral groove, are much stronger. The mesosternum is truncate behind at the middle, and enters less into the formation of the middle coxal cavities. The intercoxal process of the metasternum is therefore almost square, and the middle coxæ are more posterior than in the other genera.

The beak and claws vary according to species; the funicle is 6-jointed, the first joint being stouter, and the others slender; second and third elongate; 4–6 shorter, equal, scarcely thicker, club elongate-oval, pubescent, acute at tip.

Three species are known to me, of which the first is the type of the genus.

A. Beak slender, claws cleft; eyes nearly covered in repose.
Black, mottled with whitish pubescence; elytra
with a common cruciform white mark at base;
antennæ, tibiæ and tarsi testaceous.......... 1. **Zimmermanni.**

B. Beak stout, claws simple; eyes nearly entirely exposed.

Black, clothed with fine brown pubescence; antennæ and legs dark testaceous..............	**2. cretura.**
Brown, with some small white spots...........	**3. obscurus.**

1. **C. Zimmermanni** Gyll., Sch. Curc. iv, 580.

South Carolina and Georgia. The beak in this species is nearly as long as the prothorax, and is only about one-quarter as wide as its length. The supraocular ridges are less developed than in the two other species. The postocular lobes are very broad and nearly conceal the eyes in repose.

2. **C. cretura.** *Curculio cretura* Herbst, Käfer, vii, 70; pl. 100, f. 5; *Ceutorhynchus cret.* Say, Curc. 20; ed. Lec. i, 285; *Falciger 4-spinosus* Say, Journ. Ac. Nat. Sc. Phil. iii, 310; ed. Lec. ii, 173. *Phytobius 4-spin.* Gyll., Sch. Curc. iii, 463.

Broadly ovate, black, above thinly clothed with brown pubescence, beneath at the sides covered with pale brown scales, extending upon the sides of the prothorax. Head punctured, broadly impressed between the eyes; finely carinate behind, supraorbital ridges strong; beak rather stout, curved, as long as the head, finely punctured. Prothorax wider than long, strongly narrowed in front, densely punctured, middle of base deeply impressed; the two apical denticles are acute and distant; the posterior or lateral tubercles are also large and acute. Elytra with deep striæ, which are punctured at the bottom; interspaces not much wider than the striæ near the suture, but becoming wider externally, densely rugose. Beneath densely coarsely punctured, antennæ and legs brown; claws not toothed. Length 2.8 mm.; .11 inch.

Middle and Western States. Of the same size, form and sculpture as *C. Zimmermanni,* but quite distinct by the shorter beak, simple claws, unvariegated pubescence, and not channeled prothorax. It is perhaps worthy of being separated with the next species, as a distinct genus, on account of the eyes being almost entirely exposed in repose, while in *C. Zimmermanni* they are nearly covered.

3. **C. obscurus,** n. sp.

Broadly oval, reddish brown, head darker, strongly punctured, deeply impressed; supraorbital ridges strong; beak very stout, not longer than the head, more finely punctured. Prothorax wider than long, much narrowed in front, coarsely punctured, channeled; apical denticles acute, distant, posterior tubercles acute. Elytra with a few small spots of white hairs; striæ deep, strongly punctured; interspaces but little wider, convex, finely rugose and finely scaly. Beneath coarsely punctured, clothed with pale scales. Antennæ and legs testaceous, claws not toothed. Length 2.8 mm.; .11 inch.

Florida; Dr. E. Brendel, and Messrs. Hubbard and Schwarz. Of the same form and size as the preceding, but with shorter and stouter beak; more coarsely punctured, and rather deeply channeled prothorax.

RHINONCUS Sch.

The species of this genus have the broad stout form usual in the tribe, and only differ from *Pelenomus* by the prosternum being deeply emarginate in front, with distinct antecoxal ridges.

The middle coxæ are normal in position, their cavities being formed equally by the meso- and metasternum, whereby it differs notably from *Cœlogaster*; it also differs from that genus by the eyes, which are rounded and convex, as in the other genera, and without any trace of superciliary ridge.

The funicle of the antennæ is 7-jointed, and the claws cleft are in our species.

1. **R. pericarpius** Gyll., Sch. Curc. iv, 582; *Curculio peric.* Linn., Syst. Nat. 12th, ii, 609; Fabr., Ent. Syst. i, 2d, p. 408; et auctorum plurimorum; *Ceutorhynchus triangularis* Say, Curc. 20; ed Lec. i, 286.

Abundant in Europe; Lake Superior, Indiana, Pennsylvania, Kansas; easily known from our other Ceutorhynchoids by the larger size and conspicuous elongate sutural white spot at the base of the elytra. The prothorax is very coarsely punctured, feebly channeled, and the lateral tubercles are not very distinct. Length 4 mm.; .16 inch. I do not know why Gemminger and Harold have referred Say's description to *Phytobius.*

2. **R. pyrrhopus** Boh., Sch. Curc. viii, 2d, 172.

Middle and Western States, to Colorado. Smaller, clothed above with coarser brown pubescence, and beneath with white scales. The prothorax is feebly channeled, and the lateral tubercles are acute. The antennæ and legs are fulvous yellow. The elytra are marked with a similar elongate basal white or yellowish spot, which, however, is sometimes not very apparent. Length 2.3 mm.; .09 inch.

3. **R. longulus,** n. sp.

Elongate, black or dark brown, thinly clothed with small white scales; more dense, forming a short posterior dorsal line on the prothorax, and an elongate sutural spot at the base of the elytra. Head and beak densely punctured, the latter stout, not longer than the head. Prothorax not wider than long, slightly narrowed in front, feebly rounded on the sides, coarsely and densely punctured; slightly channeled near the base; tubercles entirely wanting. Elytra wider than the prothorax, elongate-oval, convex, humeri oblique; striæ deep, punctured, interspaces flat, densely rugose. Antennæ and tarsi testaceous. Length 2.5 mm.; .10 inch.

Southern and Western States; Florida to Illinois; Gilroy, California. Remarkable for its elongate form, and the absence of prothoracic tubercles. The eyes are round, and barely touch the prothorax in repose. The antecoxal ridges are very strong; but the prosternum is hardly emarginate in front.

Tribe XIX. BARINI.

An important type of *Curculionidæ,* containing numerous genera and groups, of which only a few are represented in our fauna. It is in this tribe that the nearest approach to *Calandridæ* and *Cossonidæ* is made, in form and general appearance, though the family characters are quite different.

The following characters will enable them to be distinguished from the other tribes in which the front coxæ are separate.

Beak not received closely upon the sternum, which however is sometimes broadly sulcate in front of the anterior coxæ; when this groove does not exist, there are sometimes seen (*Madarus*) two short approximate ridges, limited inwards by an impressed line, which may be regarded as the last remnant of the pectoral groove. In other cases (*Baris striatus*) even these lines disappear, and the merest trace of a concavity remains in the apical constriction of the prothorax, which in all the species is not emarginate beneath, and is destitute of postocular lobes. In many others even this slight concavity or flattening is wanting, and the apical part of the prothorax is altogether cylindrical, above and beneath. The meso- and metasternum are closely united, and the suture between them is frequently obliterated. The side-pieces of the mesothorax are so extended outwards and upwards, that they intervene strongly between the base of the prothorax and the elytra The sides of the latter, therefore, become obliquely truncated, giving a form not observed in any of the preceding tribes. The other characters are somewhat variable. The pygidium is sometimes exposed, sometimes covered. The claws are simple, and either divergent, connate, or even (*Barilepton*) single.

The genera in our fauna represent two groups:

Pygidium exposed, usually vertical; fifth ventral segment in the latter case truncate or subemarginate........ **Barides.**
Pygidium oblique or horizontal, not fully exposed; fifth ventral segment rounded at tip..................... **Centrini.**

Group I. **Barides.**

The separation between this group and the *Centrini* is not very definite, though characters such as the perpendicular pygidium, and the shorter and stouter beak, seen in most of the species, do not occur in the last named group. The main character to be relied on, in the absence of the easily recognized habitus, is that the elytra are more broadly separately rounded at tip, and the pygidium thus becomes more exposed.

Pygidium oblique; fifth ventral segment longer, rounded at tip; outer joints of funicle but little broader, club large, elongate-oval, pubescent.... 2.
Pygidium vertical; fifth ventral segment shorter, subtruncate.................................. 3.
2. Beak long, slender, straight.................... ORTHORIS.
" shorter, less slender, curved............... RHOPTOBARIS.
3. Club annulated, entirely pubescent............. 4.

Club with first joint larger, shining, claws divergent .... **BARIS.**
4. Claws approximate, frequently connate...... 5.
" divergent, larger, last joint of tarsi longer than usual............ 7.
5. Front coxæ widely distant, body nearly glabrous .... 6.
Front coxæ not widely distant; body densely scaly .... **TRICHOBARIS.**
6. Prothorax strongly constricted near the tip... 8.
" feebly " " " ... **PSEUDOBARIS.**
7. Second joint of funicle not longer than third.. **ONYCHOBARIS.**
" " " longer............ **AULOBARIS.**
8. Front thighs not toothed............ **AMPELOGLYPTER.**
" " obtusely toothed............ **MADARUS.**

ORTHORIS n. g.

This genus contains a sparsely pubescent species from California, which has a singular resemblance in form to *Orchestes*. It differs from the other genera of this subtribe by the beak being long, slender, cylindrical and not curved; it is separated from the front by a transverse impression, as usual. The antennæ are inserted about two-fifths from the end of the beak, the scape does not quite reach the eyes; the first joint of the funicle is stouter and longer than the others, which are nearly equal; the club is elongate-oval, as long as the joints 2–7 of the funicle, and entirely pubescent and sensitive. The front coxæ are nearly contiguous and the prosternum is broadly, though not deeply sulcate in front. The legs are rather long and slender, tibiæ not mucronate at tip; the third joint of the tarsi broad and deeply bilobed; claws simple, divergent. The prothorax is as long as wide, gradually narrowed in front, with sides perfectly straight. Elytra wider at base than the prothorax, humeri prominent, sides parallel, tips separately rounded. pygidium exposed, obliquely declivous; fifth ventral longer than the preceding, acutely rounded at tip.

1. **O. Crotchii**, n. sp.

Elongate, not convex above, black, moderately shining, sparsely pubescent with rather coarse whitish hairs. Beak slender, cylindrical, nearly straight, longer than the head and prothorax, sparsely punctulate towards the tip, more strongly towards the base; head convex, sparsely punctulate, frontal constriction deep. Prothorax as long as wide, regularly narrowed from base to tip, which is only one-half as wide as the base; sides straight, disc strongly and rather densely punctured, with a narrow smooth dorsal line. Elytra one-fourth wider at base than the prothorax, humeri prominent, rounded, sides parallel, tip rounded; striæ deep, impunctured, interspaces slightly convex, sparsely punctulate. Beneath strongly punctured, punctures becoming gradually finer upon the abdomen. Length 3.5 mm.; .14 inch.

California, locality unknown; several specimens, without sexual differences.

RHOPTOBARIS n. g.

The single species of this genus resembles closely in form, sculpture and pubescence *Trichobaris trinotata*, but without the three denuded spots at the base of the prothorax. It differs by the club of the antennæ almost as long as the funicle, elongate-oval, entirely pubescent, and very indistinctly annulated; the first joint of the funicle is as long as the three following, and stouter; 2–7 short, gradually a little broader. Beak as long as the head and prothorax, curved, not very slender, depressed as usual at tip, frontal constriction not deep. Front coxæ moderately distant, prosternum not impressed nor sulcate. Elytra elongate oblong, separately rounded at tip; pygidium exposed, obliquely declivous. Last ventral segment as long as the third and fourth united, rounded at tip, with a slight tooth at the middle in ♂, as in *Trichobaris*. Legs slender, tibiæ with a very small apical hook; third joint of tarsi moderately dilated, bilobed; last joint long, claws rather large, divergent.

1. **R. canesens**, n. sp.

Oblong elongate, very densely and rather finely punctured, and clothed with brownish gray pubescence, or hair-like scales. Head finely punctured; beak not stout, finely punctured, nearly smooth at the tip. Prothorax scarcely longer than wide, gradually but not strongly narrowed from the base, sides broadly rounded, base broadly subsinuate, truncate in front of the scutellum. Elytra a little wider than the prothorax, striæ well marked; interspaces wide, flat, densely and rugosely punctured. Punctures of under surface a little coarser than above. Length 4 mm.; .16 inch.

Colorado, four specimens.

TRICHOBARIS n. g.

I have separated as a distinct genus, certain species of elongate form and densely clothed with scales or pubescence. They differ from other genera of the group by the following characters: Club of antennæ rather small, oval, entirely pubescent, first joint forming about one-half of the mass. The funicle is stout, first joint longer, others equal in length, but gradually broader. Beak as long as the prothorax, much curved, rather stout, quite gibbous at base, frontal constriction deep. Elytra separately rounded at tip. Pygidium vertical; last ventral segment scarcely longer than the fourth; with a small apical cusp in ♂. Front coxæ very narrowly separated, prosternum broadly concave, and subsulcate in front of the coxæ. Legs slender, tibiæ with moderate apical hook; tarsi with third joint moderately dilated, bilobed, last joint long, claws approximate and connate at base.

Scales of upper surface hair-like........................ 2.
" " " oval; prothorax without denuded
basal spots.. 1. **texana.**

2. Pubescence dense; prothorax with three denuded basal spots.. **2. trinotata.**
Pubescence thin, prothorax without spots............ **3. plumbea.**

1. T. **texana,** n. sp.

This species in every respect resembles the next, except in being clothed with a dense covering of whitish scales, which on the upper surface are not hair-like, but oval, and not more than three times longer than wide. Beneath the scales are of the same size as above, and a little broader. The scutellum is concave, black, naked, and shining. There is a very small denuded basal spot, just inside of the humeral callus, but it does not extend upon the prothorax; the striæ are fine, and almost concealed by the covering of scales. Length 5 mm.; .20 inch.

Texas, Belfrage. As in the next species, the third and fourth ventral segments are smooth and shining at the middle.

2. T. **trinotata** Say, Curc. 17; ed. Lec. i, 280 (*Baridius*); Lec., Proc. Acad. Nat. Sc. Phila. 1868, 364; *Baridius vestitus* Boh., Sch. Curc. iii, 718; var. *B. mucoreus* Lec., Pr. Ac. 1858, 79; *ibid*, 1868, 364.

Atlantic district, abundant and sometimes injurious to potatoes.

Specimens from Upper and Lower California, and Arizona, are of larger size, and the proportion of oval scales on the under surface is greater; intermediate forms between these and the northern individuals, in which the vestiture of the under surface is almost entirely capillary, occur in the Southern States.

3. T. **plumbea** Lec., Proc. Acad. Nat. Sc. Phila. 1868, 364 (*Baridius*).

Maryland, one specimen. Much smaller than *B. trinotata,* more finely and less densely pubescent above and beneath, with the scales oval only upon the flanks of the prothorax; there are no denuded basal spots. The elytral striæ are deeper. Length 3 mm.; .12 inch.

AULOBARIS n. g.

I have separated as a distinct genus some specimens from the Atlantic slope, which differ from *Baris* proper by the more slender antennæ; the first joint is scarcely stouter than the second, and the latter is quite as long as the first; the remaining joints (3–7) are gradually slightly wider and the club is elongate-oval, uniformly pubescent except at the base of the first joint, and not large. The beak is longer than the prothorax, cylindrical, slightly compressed towards the base, and not very slender. The front coxæ are rather widely distant, and the prosternum is deeply and broadly sulcate in front.

The body is more convex than usual in *Baris*, though in this respect, the species resemble *Pseudobaris farcta*. The under surface is coarsely punctured, with a small white hair in each puncture.

These species represent group B of my synoptic table in Proc. Ac. Nat. Sc. Phil. 1868, 364, and may be distinguished as follows:

Brown, sides of prothorax broadly rounded........ 1. **scolopax.**
Black, “ “ strongly “ .... 2.
2. Prothorax coarsely, less densely punctured......... 4. **anthracina.**
“ less coarsely and more densely punctured 3.
3. Elytral interspaces transversely rugose and punctulate.. 2. **ibis.**
Elytral interspaces with single rows of punctures... 3. **naso.**

1. **A. scolopax** (Say), Curc. 26; ed. Lec. i, 295, (*Baridius*); Boh., Sch. Curc. iii, 699.

Illinois and Georgia, four specimens; in three of them distinct traces of a smooth dorsal line are seen on the prothorax, but in one the surface is quite uniformly punctured. The elytra become gradually wider behind the base for a short distance, so that the humeri are distinct, though very obtuse.

2. **A. ibis** Lec. loc. cit. 365.

Georgia, four specimens. More convex than the preceding and very similar in form to *Pseudobaris farctus.* The humeri are rounded, slightly prominent.

3. **A. naso** *Baridius nasutus*‖Lec. loc. cit. 295.

One specimen, Kansas, and two from California or Arizona. The elytra are not wider than the prothorax, the striæ are deeper, the interspaces narrower, and each is marked with a line of deep punctures; at the base of the third and fifth interspaces are a few whitish hairs.

I regret to have been the cause of confusion by having previously described another *Baridius nasutus* from Tejon, Cal., (Pr. Ac. Nat. Sc. Phil. 1859, 79). On reexamining that species I found that as the pygidium was covered by the elytra it did not belong to *Baris*; though I inadvertently forgot the name I had given to the species at the time I prepared the synopsis of *Baridius,* in consequence of having transferred it to another box with the other species of *Centrinus.*

4. **A. anthracina** (Boh.), Sch. Curc. iii, 727 (*Baridius*).

Oblong oval, shining, black, head less shining, finely punctured, beak as long as the prothorax, rather slender, moderately curved, finely punctured above, coarsely punctured at the sides; club of antennæ rounded oval, shining only at the base. Prothorax coarsely and deeply punctured, more densely at the sides, which are nearly parallel for two-thirds the length, then suddenly rounded and narrowed to the apex, which is constricted at the sides; dorsal line wanting. Elytra with deep striæ, interspaces moderately wide, flat, each with a row of shallow punctures, extending across the interspaces, as distinct rugæ. Prosternum deeply sulcate, with the groove sharply defined and nearly smooth. Length 3.8 mm.; .15 inch.

One specimen from Florida; Messrs. Hubbard and Schwarz. This species has the rather flat upper surface of true *Baris*, and is quite different in form from the other three above mentioned.

BARIS Germ.

As I have here restricted this genus, it contains only those species in which the club of the antennæ is small, nearly round, with the first joint not sensitive, shining, and constituting more than one-half the mass. The claws are separate, divergent, and of moderate size, and in some of the species (*sparsa*, &c.) small. The beak is stout, usually short, and much curved; the frontal constriction rather deep; sometimes it is a little longer than the prothorax. The front coxæ are never very widely separated; the prosternum is flat or broadly sulcate according to species. The pygidium is vertical, and the fifth ventral is but little longer than the fourth. Tibiæ strongly mucronate at tip. The species are glabrous or very slightly and sparsely pubescent.

	Prosternum narrow between the coxæ	2.
	“ moderately wide	4.
2.	Prothorax gradually rounded on sides	1. **strenua.**
	“ more suddenly rounded in front and constricted	3.
3.	Humeral callus less prominent	2. **umbilicata.**
	“ “ more prominent	3. **striata.**
4.	Prosternum flat, or feebly concave	5.
	“ broadly subsulcate	6.
5.	Form narrow, nearly glabrous	11.
	“ oval, nearly glabrous	4. **subovalis.**
	“ oblong, nearly glabrous	5. **transversa.**
	“ “ pubescent, more finely and densely punctured	15. **pruinosa.**
6.	Pectoral groove coarsely punctured	7.
	“ “ sparsely punctured, color brassy, claws smaller	9.
7.	Color slightly brassy	8.
	“ black	6. **carinulata.**
8.	Interspaces irregularly punctulate	7. **subæenea.**
	“ with regular rows	8. **tumescens.**
9.	Narrower	10.
	Stouter, prothorax very coarsely and sparsely punctured	9. **nitida.**
10.	Prothorax more feebly punctured	10. **interstitialis.**
	“ “ strongly and densely punctured	11. **confinis.**
	“ “ “ “ sparsely “	12. **ærea.**
11.	Prothorax rather sparsely punctured	13. **sparsa.**
	“ densely “	14. **macra.**

1. **B. strenua** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*).

Wisconsin, Kansas, New Mexico. This species resembles in form and sculpture *B. carinulatus* and others in that neighborhood, but is easily known by the prosternum being narrow between the coxæ, and flattened but not concave in front of them. The head is nearly smooth, the beak coarsely punctured, short and curved; the club of the antennæ is round, with first joint shining. Prothorax ample, rounded on the sides, more suddenly narrowed and feebly constricted in front; punctures of usual size, smooth dorsal line distinct. Elytra very little wider than prothorax, striæ very deep, interspaces elevated, flat, each with a row of strong punctures, which are approximate and furnished with very small white hairs, more obvious than in any of the following species; they are somewhat confused on the third interspace.

2. B. **umbilicata** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*). Two specimens, Pennsylvania. This species resembles the next in every respect except that the prothorax is comparatively larger, and the humeral callus of the elytra less prominent. The head is sparsely, the beak strongly punctured, the club of the antennæ nearly round, with the first joint shining. Prothorax narrowed in front from the base, and scarcely rounded for two-thirds the length, then suddenly rounded and constricted near the tip; punctures unusually large, umbilicated. Elytra a little wider than prothorax at base, striæ very deep, interspaces narrow, elevated, flat, each with a row of strong not approximate punctures. Prosternum very narrow between the coxæ, broadly concave and coarsely punctured in front of them. Beneath coarsely punctured, finely sparsely pubescent. Length 5 mm.; .20 inch.

3. B. **striata** (Say), Curc. 17; ed. Lec. i, 281; Lec. Pr. Ac. 1868, 362. Michigan, Illinois, Kansas, Arizona. This is one of our largest species and is easily recognized by the comparatively smaller prothorax, and more prominent humeral callus. The prosternum is very narrow between the coxæ, flat and coarsely punctured in front of them. The antennal club is nearly round and the first joint is shining. Length 5.5–6.5 mm.; .22–.26 inch.

4. B. **subovalis** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*). One specimen; Wisconsin. A rather large species of oval form, and shining black color. Head very convex, sparsely punctulate; beak a little longer and less stout than in the following eight species, much curved, constricted at base, strongly punctured. Prothorax narrowed from the base forwards, then more suddenly rounded and narrowed to the tip, which is slightly constricted at the sides; punctures strong, but not very coarse, more dense at the sides, dorsal line distinct. Elytra scarcely wider than the prothorax, humeri rounded, not prominent; striæ deep, interspaces flat, finely but distinctly punctulate, punctures of the third interspace confused, of the others in irregular rows. Prosternum uniformly coarsely punctured, longitudinally concave or broadly sulcate in front; front coxæ moderately distant. Antennæ with club nearly round and first joint shining. Length 6 mm.; .24 inch.

5. B. **transversa** (Say), Curc. 18, (*Baridius*); ed. Lec. i, 282; Lec., Pr. Ac. Nat. Sc. Phil. 1868, 362; *B. quadratus* Lec., ibid. 361.

Illinois to Kansas. Body oblong, rather elongate; head feebly punctulate, beak rather finely punctured, short, stout and much curved; frontal constriction not deep. Prothorax wider than long, subquadrate, very slightly narrowed from the base for three-fourths the length, then suddenly narrowed to the tip, which is scarcely impressed at the sides; punctures coarse, dense, smooth dorsal line narrow, sometimes obsolete. Elytra with deep striæ, interspaces flat, strongly and confusedly punctured, forming here and there transverse rugosities. Prosternum densely and coarsely punctured, flattened and slightly concave in front, but not sulcate; front coxæ moderately distant, antennæ as usual. Length 4.5 mm.; .18 inch.

6. B. **carinulata** (Lec.), Pr. Ac. Nat. Sci. Phil. 1858, 79; ibid. 1868, 362, (*Baridius*).

One specimen, Texas. Closely allied to the last, but the dorsal line of the prothorax is more distinct, and the punctures of the elytra are irregular only on the second and third interspaces, and form regular rows on the others. The prosternum is longitudinally concave, and subsulcate, though the limits of the groove are not well defined; the punctures are also less dense.

7. B. **subænea** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 361, (*Baridius*).

Middle States. The color is brassy black, the beak more strongly punctured. the prothorax not wider than long, coarsely and densely punctured, with faint dorsal line. Elytra with deep striæ, interspaces confusedly punctured. Prosternum very coarsely punctured, broadly subsulcate. Length 4.5 mm.; .18 inch.

8. B. **tumescens** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, (*Baridius*).

New York, Illinois, Louisiana, Texas. A brassy species of oblong form, almost like *B. transversa*, with the prothorax coarsely punctured, and dorsal line obsolete; the beak is finely punctured. Elytra with deep striæ, interspaces narrow, each with a row of fine punctures, which are confused upon the third. Prosternum coarsely punctured, broadly subsulcate. Length 4–4.5 mm.; .16–.18 inch.

9. B. **nitida**, n. sp.

Oblong-oval, shining black with a bronze tint. Head convex, scarcely perceptibly punctulate; beak short, stout, curved, finely punctured, frontal constriction well marked. Prothorax not wider than long, gradually narrowed from the base for two-thirds the length, then rounded and more suddenly narrowed to the tip, which is not at all impressed on the sides; disc very coarsely but sparsely punctured, without trace of smooth dorsal line. Elytra scarcely wider than prothorax, striæ deep, interspaces rather wide, each with a single series of well impressed distant punctures. Prosternum at the middle broadly but distinctly sulcate and sparsely punctured; flanks broadly concave, so that the lateral edge is somewhat distinct; front coxæ moderately distant. Antennæ as usual. Length 4.6 mm.; .18 inch.

One specimen, Florida; Dr. Edward Palmer. Very distinct from all others in our fauna. I observe in this and the three following species a peculiarity, which is extremely rare among *Curculionidæ*, and in fact among *Rhynchophora*; the flanks of the prothorax are very suddenly inflexed, and slightly concave, so that the side margin, though not well defined by a sharp line, is still distinctly indicated.

10. **B. interstitialis** (Boh.), Sch. Curc. iii, 684, (*Baridius*); ? (*Rhynchænus int.*) Say, Journ. Acad. Nat. Sc. Phil. iii, 314; ed. Lec. ii, 176; *Baridius int.* Say, Curc. 18; ed. Lec. i, 282.

Middle and Southern States. I have retained this name for a species which is quite distinct from all others in our fauna.' The well marked structural characters which enable our species of *Baris* to be easily separated, were, however, not perceived by Say, nor by the collaborators of Schönherr, and I am therefore doubtful if the present name should be preserved. As far as I can judge from the descriptions, this species is the one intended by Boheman, founded upon a typical specimen from Florida sent by Say, and on others from South America. But I am very uncertain if it be the one originally described by Say, and quite doubtful if that original be the same with the one subsequently referred to (Curc. 18), of which it is said that the punctures of the elytral interspaces "have a transverse rugulous appearance." In the original description (J. Ac. iii, 314), these same punctures are declared to be orbicular.

Head sparsely punctulate, beak finely punctured, frontal constriction strong; prothorax strongly but not densely punctured, scarcely wider than long, slightly narrowed from the base for two-thirds the length, then more suddenly rounded and narrowed to the tip, which is feebly impressed at the sides. Elytra with deep striæ, interspaces flat, each with a row of very fine punctures, somewhat confused on the third interspace, and nearly obsolete in some specimens. Prosternum at the middle broadly but rather deeply sulcate, and more sparsely punctured. Antennæ as usual. Length 3.3 mm.; .13 inch.

The color is black, slightly bronzed.

11. **B. confinis** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 362, (*Baridius*).

Atlantic States, to Kansas. Very closely related to *B. interstitialis*, but more brassy, smaller and a little narrower, with the punctures of the prothorax larger and less distant. The punctures of the interspaces, though fine, are distinct, and arranged in rows, those of the third interspace are not confused. Length 3 mm.; .12 inch.

12. **B. ærea** (Boh.), Sch. Curc. viii, 1st, 141, (*Baridius*); Lec., Pr. Ac. Nat. Sc. Phil. 1868, 362.

Southern States. Narrower, usually smaller, brighter brassy, with the punctures of the prothorax strong, but less dense, and those of the elytral interspaces extremely small and distant, placed in single rows. Length 2.5–3.3 mm.; .10–.13 inch.

13. **B. sparsa** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 364, (*Baridius*).

Oregon and California, three specimens. Though the prosternum is nearly flat, and coarsely punctured in this species, I have thought it better to separate it from *B. subovalis* and *transversus* on account of the narrower form, which approaches that of *B. ærea.* The prothorax is however more regularly rounded on the sides, and is fully as long as wide; the punctures are coarse but not dense. The elytral striæ are less deep than usual and the punctures of the interspaces are well marked; these punctures are finer and more distant in the specimen from Oregon, than in those from California. The latter being better preserved show fine but distinct white hairs proceeding from each interstitial puncture. The thoracic smooth dorsal line is very distinct in the Californian, but almost obsolete in the Oregon specimen. A larger series of specimens will show that these differences are individual rather than specific. Length 3 mm.; .12 inch.

14. **B. macra** (Lec.), Pac. R.R. Expl. and Surv. Ins. 58, (*Baridius*); Pr. Ac. Nat. Sc. Phila. 1868, 362.

San Francisco, Cal., three specimens. Nearly related to *B. sparsa,* and of the same narrow form. The prothorax is however more densely punctured, without dorsal smooth line. The punctures of the interspaces of the elytra are very small, and upon the third are somewhat confused. Prosternum between the coxæ not very wide, slightly longitudinally concave, but scarcely subsulcate. Length 3.5 mm.; .14 inch.

15. **B. pruinosa**, n. sp.

Rather robust, oval-subquadrate, black, pruinose with small narrow white scales, some of which are hair-like. Head naked, nearly smooth; beak shorter than prothorax, stout, curved, punctured, pubescent, constricted at base. Prothorax scarcely longer than wide, gradually narrowed from the base for two-thirds the length, then more rapidly to the tip, which is constricted on the sides; disc densely but not coarsely punctured, scutellar lobe larger than usual, emarginate; dorsal line indistinct, or wanting. Elytra gradually a little wider than the prothorax, striæ deep, interspaces flat, wide, densely punctured. Beneath densely punctured. Front coxæ moderately separated, prosternum slightly concave, not sulcate. Club of antennæ nearly round, with first joint slightly pubescent, but shining. Length 4.5 mm.; .18 inch.

Texas, Belfrage, not rare. The third joint of the tarsi is broader than usual, and the claws larger, thus showing a transition towards *Onychobaris,* but the club of the antennæ is of the present genus.

ONYCHOBARIS n. g.

Under this name I would group those species in which the club of the antennæ is more oval, entirely sensitive and pubescent, the first joint forming less than one-half the mass; the second joint of the funicle not longer than the third; and the claws divergent and larger than usual.

In other respects this genus agrees with *Baris*, and the species may be classified similarly, though the front coxæ are usually much more widely separated than in *Baris*.

Interspaces of elytra with rows of punctures.......... 2.
Interspaces of elytra densely punctured, and thinly pubescent.. 1. **densa.**
2. Prosternum very wide between the coxæ............ 3.
" moderately wide between the coxæ....... 5.
3. Black, glabrous, or nearly so.......................... 4.
Dull black, finely pruinose.......................... 2. **subtonsa.**
4. Prothorax without smooth dorsal line................ 3. **pectorosa.**
" with broad dorsal line...................... 4. **distans.**
Much smaller and narrower.......................... 5. **seriata.**
5. Sparsely pubescent; very coarsely cribate............ 6. **cribrata.**
Prothorax plicate, elytra with pattern of large narrow scales.. 7. **rugicollis.**

1. **O. densa** (Lec.), Pr. Acad. Nat. Sc. Phil. 1859, 79; *ibid.* 1868, 362. San Diego, Cal., three specimens. Broader and less finely pubescent than *O. subtonsa,* with the prothorax more coarsely punctured and subcarinate; it is gradually narrowed in front from the base for two-thirds the length, then rapidly narrowed to the apex, which is distinctly constricted. Head punctured in front, smooth behind. Striæ of elytra deep, interspaces flat, irregularly punctured. Beak as long as prothorax and not stout; club of antennæ oval, entirely pubescent and sensitive. Front coxæ widely separated, prosternum flat, densely and coarsely punctured. Length 4 mm.; .16 inch.

2. **O. subtonsa,** n. sp.

Less robust, dull black, pruinose with very fine whitish pubescence, more evident on the elytra than on the prothorax. Head punctured in front, nearly smooth behind, beak longer than in the preceding. Prothorax scarcely wider than long, sides parallel for two-thirds the length, then rapidly narrowed and rounded to the apex, which is feebly constricted at the sides: disc densely punctured, each puncture with a small hair at the bottom; antescutellar lobe broad, not emarginate. Elytra scarcely wider than the prothorax, striæ deep, interspaces flat, each with a row of small punctures. Front coxæ widely separated; prosternum nearly flat. Length 4 mm.; .16 inch.

Texas, Belfrage, one specimen.

3. **O. pectorosa,** n. sp.

Ovate, narrower behind, black, nearly glabrous above. Head sparsely punctulate; beak as long as the prothorax; rather slender, punctulate, much curved at base, frontal constriction deep. Prothorax larger than usual, wider than long, slightly narrowed from the base for two-thirds the length, then rapidly narrowed to the tip, which is constricted at the sides; disc rather closely but not coarsely punctured; scutellar lobe more prominent than usual, truncate. Elytra at base not wider than prothorax, gradually narrowed behind; striæ deep, interspaces flat, each with a row of strongly marked punctures. Prosternum very wide between the coxæ, coarsely punctured, with two slight longitudinal impressions in front. Length 4 mm.; .15 inch.

Texas, Belfrage, one specimen.

4. **O. distans** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*).

New Mexico, Fendler, one specimen. Oval subquadrate, black, scarcely shining, glabrous. Head sparsely punctulate; beak punctulate, as long as the prothorax, not stout, regularly and strongly curved, frontal constriction feeble. Prothorax suddenly narrowed, rounded on the sides in front, and constricted at the sides near the tip; punctures distant on the disc, more dense towards the sides; smooth dorsal line very distinct. Elytra with deep striæ, interspaces flat, rather wide, with rows of shallow distant punctures, which are more evident than usual. Prosternum very wide between the coxæ, coarsely and sparsely punctured, broadly concave in front, with two small impressions. Length 3.3 mm.; .13 inch.

5. **O. seriata** (Lec.), Pac. R. R. Expl. and Surv. Ins. 58; Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*).

San Francisco, Cal.; one specimen. A small, shining black species of narrow form, resembling in this respect the next, as well as *Baris sparsa*, and *Pseudobaris angusta*. From the last two it is easily distinguished by the generic characters; from *O. macra* it is readily known by the more distant front coxæ. The prosternum is as wide as in the two preceding species, flat and coarsely punctured, without impressions. The third joint of the tarsi is less broadly dilated.

Head dull, feebly punctulate; beak as long as the prothorax, not stout, rugosely punctured, regularly curved, frontal constriction faint. Prothorax scarcely longer than wide, sides rounded in front, and scarcely constricted; punctures strong, and dense, without smooth dorsal line. Elytra with rather narrow striæ, interspaces flat, each with a row of small distant punctures. Length 2.5 mm.; .10 inch.

6. **O. cribrata**, n. sp.

Elongate, brownish black, shining, sparsely clothed with rather coarse white reclinate hairs. Head smooth, beak short, not longer than the prothorax, stout, curved, punctured, strongly constricted at base. Prothorax quadrate, wider than long; sides parallel, suddenly narrowed and rounded near the tip; very coarsely punctured, and smooth dorsal line narrow, but distinct. Elytra a little wider than the prothorax, sides parallel, rounded at the tip, striæ deep, interspaces narrow, each with a row of rather distant small punctures, from which proceed white hairs. Beneath coarsely punctured, punctures becoming smaller and distant upon the abdomen. Length 3.3 mm.; .125 inch.

Texas, Belfrage, two specimens. The front coxæ are moderately distant, as in most of the glabrous species; the prosternum is slightly concave. The club of the antennæ is short oval, and the first joint constitutes more than one-half the mass and is somewhat shining. In the best preserved specimen the pubescence is more dense at the third interspace, and on the second to the fifth interspaces for a short distance behind the middle.

7. **O. rugicollis**, n. sp.

Oblong oval, brownish-black, above with scattered elongate yellow scales, which on the elytra form an indefinite pattern of a transverse band at the base, and another just behind the middle connected by some less densely placed scales. Head convex, nearly smooth, beak as long as the prothorax, attenuated towards the tip, strongly curved, punctured, frontal constriction deep. Prothorax wider than long, feebly narrowed from the base for two-thirds the length, rounded on the sides, slightly constricted near the tip; very deeply and coarsely rugose, leaving narrow elevated folds, much as in *Rhyssematus*; there are a few scattered yellow hair-like scales; base scarcely sinuate. Elytra a little wider at base than the prothorax, gradually narrowed behind, scarcely separately, but almost conjointly rounded at tip; striæ deep, interspaces flat, each with a row of small distant punctures. Prosternum very broad between the coxæ, coarsely punctured, marked in front with two lines converging behind, and enclosing a smooth triangular space. Club of antennæ small, oval rounded, pubescent; claws divergent. Length 4.2 mm.; .17 inch.

Middle and Southern States. The pygidium is less exposed than usual, but is perpendicular, so that this species cannot be confounded with *Centrinus*, in which it is nearly horizontal, or at most oblique.

PSEUDOBARIS n. g.

The species of this genus have the second joint of the funicle no longer than the third, and the club not larger, oval, with the first joint pubescent and sensitive, and constituting less than one-half the mass; the claws are approximate and slightly connate at base. In these respects they agree with *Trichobaris*, but differ by the front coxæ being very widely separated, and by the absence of dense scaly or hairy vestiture, though there are a few scattered scales on the elytra of each species. The prosternum is broadly sulcate in front; the limits of the groove are less sharply defined as in *Aulobaris*.

	Body elongate-oval, punctures of interspaces in rows	2.
	" stouter convex, confused....................	1. **farcta.**
2.	Elytral punctures large, shallow....................	3.
	" " small............................	4.
3.	Prothorax with sides slightly oblique...............	2. **nigrina.**
	" " " nearly parallel.................	3. **angusta.**
4.	Side pieces of body densely squamose................	5.
	" " " not squamose.....................	4. **pusilla.**
5.	Brown, prothorax with smooth dorsal line...........	5 **albilatus.**
	Black, prothorax without dorsal line.................	6. **T-signum.**

1. **P. farcta** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 362, (*Baridius*).

Kansas, Colorado, and Texas. A robust convex species, having the appearance of *Centrinus*. The prosternum is broadly and tolerably deeply sulcate, thus showing a tendency towards *Aulobaris*, which it resembles in appearance, though the limits of the groove are ill-defined. The second joint of the funicle is however no longer than the third. The base of the third interspace of the elytra has a small scaly spot, and there are also scattered hair-like scales. The striæ are deep, the punctures of the interspaces are transverse and rather confused. Length 4–5 mm.; .16–.20 inch.

2. **P. nigrina** (Say), Curc. 31; ed. Lec. 1, 295, (*Baridius*); Boh., Sch. Curc. iii, 690; Boh., *ibid*, viii, 154; Lec., Pr. Ac. Nat. Sc. Phil. 1868, 363.

Southern States. The white scales are very sparse, and easily removed; they are arranged singly upon the interspaces, except at the base of the third interspace, where they form a small spot. The prosternum is broadly and deeply sulcate; the groove is sparsely punctured, and sharply limited. Length 3–4 mm.; .12–.16 inch.

3. **P. angusta** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*).

This species, from the material now at my command seems separable from *P. nigrina* only by its narrower form, the sides of the prothorax nearly parallel behind, and by the entire absence of smooth dorsal line of the prothorax. Specimens from Texas which are clearly referable to *P. nigrina*, vary in the last mentioned character, the dorsal line being either distinct or obsolete, so that only the form of body remains to distinguish them apart. Length 2.7–3.3 mm.; .11–.13 inch. Illinois to Kansas.

In one specimen a few scales remain, indicating a vestiture similar to the preceding. On re-examining the specimens I find my former observation that the second joint of the funicle is longer than the third is incorrect.

4. **P. pusilla** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 363, (*Baridius*).

New York, one specimen. Allied to *P. nigrina*, but more oval and less elongate, with the punctures of the prothorax less coarse, and without smooth dorsal line; the sides are also more oblique. Head and beak sparsely finely punctured; the latter as long as the prothorax, rather slender, very slightly curved. Elytra with deep striæ, and rather wide flat interspaces, each with a row of fine but distinct punctures; the specimen is rubbed, but a few white scales are visible at the base of the third interspace, which induce me to believe that in well preserved specimens they are scattered as in the preceding species. The prosternum is broadly and strongly sulcate, and sparsely punctured, but the edges of the groove are less sharply defined than in *P. nigrina*. Length 2.5 mm.; .10 inch.

5. **P. albilatus**, n. sp.

Elongate, brown, shining; with a small elongate spot at the base of the third interspace, and the side pieces of meso- and metathorax densely clothed with white scales. Beak punctured, feebly striate near the base; head finely punctured. Prothorax a little longer than wide, rounded on the sides in front, not constricted at tip; disc coarsely, rather densely punctured, with a narrow smooth dorsal line. Elytra not wider than the prothorax, striæ narrow, deep, impunctured; interspaces flat, each with a row of extremely small punctures; third interspace clothed for one-fifth the length with white scales. Beneath strongly punctured; sides of the last three ventral segments clothed with white scales. Length 2–3 mm.; .08 –.12 inch.

Enterprise, Florida; Messrs. Hubbard and Schwarz. The specimens are somewhat abraded, but in one of them I observe scattered white scales remaining on the prothorax and elytra. It is quite probable, therefore, that well preserved individuals are marked as in the next species, from which it differs chiefly by the larger size, brown color, smooth dorsal stripe on the prothorax, and fine punctures of the interspaces of the elytra.

6. **P. T-signum** (Boh.), Sch. Curc. viii, 1st, 154, (*Baridius*).

South Carolina, Zimmermann; Florida, Hubbard and Schwarz. Much smaller and still narrower than *P. nigrina*. Head finely punctulate, beak stout, strongly curved, as long as the prothorax, punctured, frontal constriction feeble. Prothorax scarcely longer than wide, subquadrate, sides not oblique, feebly rounded for three-fourths the length, then more suddenly rounded and narrowed to the tip, densely and strongly punctured, without dorsal line. Elytra wider than the prothorax, humeri oblique, distinct; striæ deep, interspaces flat, each with a row of fine but distinct punctures; a short line of white scales at the base of the third interspace, (and a small spot behind the middle, probably rubbed off in the specimen before me), metasternal side pieces and of the last ventral segments clothed with small white scales. Prosternum not so wide between the coxæ as in the other species, broadly and less deeply sulcate in front, club of the antennæ rather larger than usual. Length 2.2 mm.; .085 inch.

In well preserved specimens the surface is clothed with scattered, small white scales, which are more dense at the sides of the prothorax, at the base of the third interspace of the elytra, and the side pieces of the meso- and metathorax, and at the sides of last three ventral segments. These scales are however easily abraded.

AMPELOGLYPTER n. g.

This genus contains species which depredate on the small stems of grape vines and allied plants, producing excrescences. Two of them are readily distinguished from the preceding genera by the smooth and shining surface of the elytra, the interspaces of which are wide and not punctured; the striæ are fine, the posterior callus prominent, and the surface undulated by broad transverse impressions. In these respects they resemble *Madarus*, but differ by the shorter and stouter beak, the stouter antennæ, and the broadly excavated prosternum, which is not suddenly declivous between the coxæ. The front thighs are not toothed, and the claws are connate at base.

The form is also quite different from *Madarus*; the elytra are a little wider than the prothorax, as in *Baris*.

The front coxæ are very widely separated; the transvere suture between the coxæ is very well marked, and the prosternum is widely, but not deeply excavated; club of antennæ elongate-oval, annulated, pubescent.

Three species are known to me:

Elytral striæ not punctured;
  Brown, prothorax obliquely narrowed from the base 1. **sesostris.**
  Black, " suddenly " near the tip.. 2. **ater.**
Elytral striæ crenate; body elongate, brown, opaque.... 3. **crenatus**

1. A. **Sesostris** (Lec.), Pr. Ac. Nat. Sc. Phil. 1868, 364 (*Baridius*); Walsh, Am. Entomologist, ii, 105. *Madarus vitis* Riley, 1st Missouri Report, 131.

Western States, on cultivated vines. Somewhat narrower than the next, and easily known by the brown color and different form of the prothorax. Head scarcely punctulate, beak as long as the prothorax, slightly curved, feebly punctured, front constriction faint. Prothorax as long as wide, sparsely punctured, with a smooth dorsal line, sides oblique from the base for more than one-half the length, then rounded and narrowed for a short distance, and then broadly constricted at a greater distance than usual from the tip. Elytra very little wider than the prothorax, with a vague transverse impression near the base, and two others near the sides; posterior callus small, rather prominent; striæ fine, interspaces wide, flat. Beneath coarsely punctured. Length 3 mm.; .12 inch.

2. A. **ater**, n. sp.

Very black, shining; beak stouter and more curved than in the preceding. Prothorax more sparsely punctured, more rugose at the sides, which are scarcely narrowed for two-thirds their length, then very suddenly rounded, and constricted far from the tip. Elytra a little wider than the prothorax at base, sculptured and impressed as in the preceding. Length 3 mm.; .12 inch.

Southern and Western States, on *Ampelopsis quinquefolia*. Mentioned as *Madarus ampelopsis* by Walsh and Riley, loc. cit. sup., but not described.

3. A. **crenatus**, n. sp.

Elongate, dull ferruginous, opaque. Beak curved, as long as the head and prothorax, punctured; head not punctured. Prothorax subquadrate, sides parallel, rounded near the tip, and strongly constricted, base bisinuate; densely and coarsely punctured, constriction marked on the sides with a transverse row of larger punctures. Elytra a little wider than the prothorax, sides parallel, surface broadly impressed behind the base; striæ deep, very coarsely punctured, interspaces narrow, third and ninth carinate near the tip, and confluent, so as to leave a deep fovea between their junction and the posterior callosity, which is well marked. Beneath coarsely punctured, less so upon the abdomen; fifth ventral less convex and less densely punctured than in the two preceding species. Claws small, connate for half their length. Length 2.8 mm.; .11 inch.

Virginia, and Maryland; two specimens. Narrower even than *Pseudo baris angusta*.

MADARUS Sch.

In this genus the upper surface is very smooth and shining, and the surface of the elytra undulated, but the beak is longer than the prothorax and slender, almost as in *Centrinus*; the antennæ are longer and more slender, the first joint of the funicle as long as the three following; club elongate oval, annulated, entirely pubescent. The prosternum is extremely wide and gibbous between the coxæ; declivous in front, not excavated, but with two very short impressions. Front thighs armed with an obtuse tooth, claws approximate, but not connate at base.

The preceding genus makes a gradual transition from *Baris* to *Madarus*, and the arrangement of Lacordaire by which the genera just named are separated in two different subtribes is manifestly unnatural.

1. **M. undulatus** Boh., Sch. Curc. iii, 640; *Rhynchænus und.* Say, Journ. Ac. Nat. Sc. Phil. iii, 315; ed. Lec. ii, 177.

Massachusetts to Alabama, Texas, and Kansas. The northern specimens are entirely black; those from the South and West have the prothorax red. Although Boheman described all the thighs as toothed, I find that the middle and hind pairs are quite unarmed. The tooth of the front pair is rather large, but obtuse.

Group II. **Centrini.**

The only characters I can give for the recognition of this group, as distinguished from *Barides*, are: the elytra conjointly rounded at tip, or nearly so; the pygidium thus becomes entirely covered, or only partly exposed, and is nearly horizontal, or at most somewhat oblique, and never vertical. The last ventral is consequently regularly rounded at tip, never truncate or emarginate. In addition to these characters the ventral surface of the abdomen is more convex, frequently ascends obliquely, as in *Zygopini*, but in a much less degree. The tibial hooks are less developed than in *Baris* and its allies, and in many species are scarcely apparent. The beak and antennæ are generally of more slender form than in *Baris*, but these characters are not without exceptions, as will be seen below.

A. Body without erect bristles.
Tibiæ stout, with longitudinal grooves (as in *Baris*) 2.
" slender, not grooved........................ 3.
2. Pectoral groove shallow, indefinite.............. PACHYBARIS.
" " deep, sharply defined .... STETHOBARIS.
3. Side margin of prothorax as usual.............. 4.
" " " well defined........... MICROCHOLUS.
4. Third joint of tarsi broad, bilobed.............. 5.
" " narrow...................... CALANDRINUS.
5. Claws separate.. .... CENTRINUS.
" connate at base.......................... ZYGOBARIS.
" single.................................. BARILEPTON.
B. Body with stout erect bristles, intermixed with
the dense covering of scales; tarsi narrow.
Bristles very long................................ EUCHÆTES.
" short.................................. PLOCAMUS.

PACHYBARIS n. g.

A single glabrous species of very stout form and coarse sculpture represents this genus. It has the characters of *Onychobaris* except that the elytra are conjointly rounded behind, so as to cover the pygidium, and the *fifth ventral, though very transverse* is broadly rounded behind. The beak is slender, longer than the head and prothorax, moderately curved, and striato-punctate, a character not seen in any other of our species. The antennæ are stout, first joint of funicle elongate, second not longer than the third, remaining joint gradually stouter, merging into the club, which is elongate-oval, annulated and entirely pubescent. Prothorax broader than long, strongly but gradually narrowed from the base, rounded on the sides, scarcely constricted in front. Elytra very little wider than prothorax at base, humeral callus not prominent, gradually narrowed behind, conjointly rounded at tip. Prosternum rather broad between the coxæ longitudinally slightly concave in front, with two short impressions connected at their anterior end. Legs rather stout, thighs unarmed, tibiæ rather short, scarcely mucronate, marked with two fine lines and intervening ridge on outer surface; third joint of tarsi broadly dilated, last joint moderate, claws rather large, divergent.

1. **P. porosus**, n. sp.

Broadly oval, black, moderately shining. Beak slender, punctured in rows, sides striate; head punctured, frontal constriction obsolete. Prothorax strongly punctured, scutellar lobe large, emarginate. Elytra very deeply striate, striæ punctured, interspaces flat, each with a row of large approximate punctures, bearing very short whitish hairs. Beneath coarsely punctured. Length 3.7 mm.; .15 inch.

Enterprise, Florida, May 10th: Messrs. Hubbard and Schwarz.

STETHOBARIS n. g.

The single species of this genus is rather broadly oval, though less so than *Pachybaris*. The beak is as long as the head and prothorax, rather stout, curved finely, punctulate; head distinctly punctured, convex, frontal constriction strong, eyes narrowly separated beneath; antennæ stout, first joint of funicle elongate, second not longer than third, the following gradually a little broader; club large, elongate oval, annulated, entirely pubescent. Prothorax broader than long, convex, rapidly narrowed in front and rounded on the sides, very strongly and tubularly constricted near the tip. Elytra gradually wider than the prothorax at base, then rounded on the sides, and conjointly rounded at tip, covering entirely the pygidium. Front coxæ rather widely separated, prosternum with a deep smooth sharply defined groove. Legs longer, rather stout, thighs not toothed, tibiæ faintly grooved, feebly armed at tip; third joint of tarsi broadly dilated, last joint small; claws very small, approximate but not connate.

1. **S. tubulatus.** *Campylorhynchus tub.* Say, Curc. 20; ed. Lec. i, 285; *Baridius ovatus* Lec., Pr. Ac. Nat. Sc, Phil., 1868, 363.

Middle, Southern and Western States. The prothorax is deeply but not very densely punctured, and the scutellar lobe is prominent, and subemarginate; the dorsal line is faint, or wanting. The elytra are deeply striate, the striæ are punctured, and the interspaces are narrow, each with a row of fine but distinct punctures, bearing very short white hairs; beneath coarsely punctured, last ventral segment densely punctured. Length 2.5-3 mm.; .10-.12 inch.

There may be some doubt about the reference of Say's name to this species in consequence of the expression, "interstitial lines flattened, and with a series of punctures each furnishing a recurved, whitish hair," which would seem referable rather to the genus *Zaglyptus* (p. 236) of the *Ithyporus* group of *Cryptorhynchini*. In other respects the description so well accords with the present insect, that I prefer suppressing the name proposed by me as a synonym, until some other insect occurs better suited to Say's description. In case this should happen the name *ovatus* can be restored.

MICROCHOLUS n. g.

Form of body like *Baris*, but stouter and more convex, with a few scattered white scales. Beak as long as the prothorax, curved, cylindrical, rather stouter towards the base, not striate, scarcely perceptibly transversely impressed at base: head broad, convex, eyes widely separated, flat, finely granulated, pointed beneath; antennal grooves commencing nearly one-third from the tip, narrow, running obliquely downwards, almost confluent. Antennæ with seven-jointed funicle, first joint as long as the three following united, slender, slightly clavate in *M. striatus* and *M. puncticollis*, shorter and stouter in *M. lævicollis*; second a little longer than third; 3-7 gradually slightly broader; club elongate-oval, pubescent, annulated towards the tip. Prothorax strongly narrowed in front, constricted at tip, sides rounded, flanks concave, so as to cause the lateral edge, though not acute, to appear well defined; base truncate; post-ocular lobes wanting: prosternum short, slightly concave, rather narrow between the coxæ; middle coxæ moderately widely, hind coxæ more widely separated, the latter not reaching the side of the body. Scutellum very small. Elytra truncate at base, humeral angles rounded, a little narrower than the prothorax, sides rounded and obliquely narrowed behind; pygidium entirely covered by the conjointly rounded tips; disc very convex, striæ sometimes indistinct. Mesosternum short, ventral segments slightly unequal, sutures scarcely curved. Thighs rather long and stout; tibiæ rather short, sinuate, feebly mucronate; tarsi with third joint very broadly dilated and bilobed; last joint slender, with very small claws.

Prothorax punctured, constriction near the tip........ **1. striatus.**
Elytra with well-marked striæ........................ **2. puncticollis.**
Prothorax smooth, constriction distant from the tip.... **3. lævicollis.**

1. M. **striatus**, n. sp.

Robust, convex, black, thinly clothed with oval white scales, more densely placed on the under surface, but easily removed by abrasion, and of which but few remain in the specimen. Beak nearly smooth, feebly impressed transversely at base. Prothorax wider than long, sides oblique, rounded, very much narrowed in front, moderately constricted near the tip, sparsely finely punctured, punctures less distinct towards the sides, which are more obtuse than in the other two species. Elytra not narrower than the prothorax, gradually less narrowed behind than in the other two species; striæ well marked, rather deep, interspaces broad, flat, each with a row of feeble punctures. Antennæ with the first joint of funicle slender, much longer than the second. Beneath rather coarsely punctured, but not very deeply so on the flanks of the prothorax. Length 4.3 mm.; .17 inch.

One specimen, Lake Harney, Florida, May 4th; Messrs. Hubbard and Schwarz. Probably a female, in which case the male would have the prothorax wider and more rounded on the sides, and the lateral edge more compressed.

2. M. **puncticollis**, n. sp.

Robust, very convex, black, uniformly, but thinly clothed with silvery white oval scales, more densely placed on the under surface. Head glabrous behind the eyes, punctured in front, nearly smooth behind; beak punctured, scaly, not impressed at base; front scaly. Prothorax wider than long, strongly rounded on the sides, hind angles rounded, lateral edge nearly acutely defined; strongly narrowed in front, and rather strongly constricted near the apex, which is scarcely one-half as wide as the base; disc strongly punctured, more densely towards the sides, with a broad, smooth dorsal space. Elytra narrower than the prothorax, broadly but obliquely narrowed on the sides; striæ fine, in some places indistinct, interspaces broad, sparsely irregularly punctulate. Antennæ with the first joint of funicle twice as long as the second, which is longer than the third. Beneath rather coarsely punctured; punctures of the flanks of the prothorax equally deep. Length 3.7 mm.; .15 inch.

Baldwin, Florida, June 10; many specimens; Messrs. Hubbard and Schwarz.

3. M. **lævicollis**, n. sp.

Robust ovate, very convex, almost gibbous, black, shining (sparsely squamose, with linear white scales, which have been mostly removed by abrasion). Beak sparsely punctured, feebly transversely impressed at base; head convex, sparsely punctulate in front, smooth behind. Prothorax twice as wide as long, very convex, strongly narrowed in front, sides obliquely narrowed, very strongly constricted about one-fourth from the apex, which is half the width of the base; the latter is not truncate, but very broadly rounded; surface feebly and sparsely punctulate, lateral edge nearly acutely defined. Elytra not narrower than the prothorax at base, basal angles not rounded, sides gradually narrowed and slightly rounded to the tip; striæ fine, feebly punctured, ending near the base in deep foveæ; interspaces broad, flat, smooth. Antennæ with the first joint of funicle scarcely longer than the second, but somewhat stouter than in the other two species. Length 2.2 mm.; .09 inch.

St. Louis, Missouri; one specimen; Mr. M. Schuster. The prothorax is more rapidly narrowed in front and more strongly tubulate than in any other Curculionide known to me in our fauna.

CALANDRINUS, n. g.

The small insect which constitutes this genus bears a singular resemblance in miniature to *Sphenophorus*, but is clothed with scale-like hairs, as in *Centrinus*.

Beak slender, cylindrical, curved, as long as the head and prothorax, separated from the head by a transverse constriction; head rather large, convex; eyes distant, flat, pointed beneath, finely granulated; antennal grooves descending obliquely towards the lower angle of the eyes. Antennæ with the scape not attaining the eyes; funicle 7-jointed, first joint as long as the second and third united, but scarcely stouter; second longer than third; 3–7 gradually wider, merging into the club, which is elongate-oval, pointed, pubescent and annulated. Prothorax two-thirds as long as the elytra, longer than wide, rounded on the sides, a little wider near the middle, narrowed before the middle, constricted, but not tubulate towards the apex; base broadly bisinuate, basal angles slightly obtuse, scutellar angle very broad; postocular lobes wanting; prosternum long in front of the coxæ, which are rather widely separated; scutellum very small, punctiform. Elytra elongate-oval, a little wider than the prothorax, sides rounded, forming an obtuse angle with the sides of the prothorax; striæ deep, not punctured; tips conjointly rounded, covering entirely the pygidium. Middle and hind coxæ widely separated; metasternum short, ventral segments unequal, sutures angulated at the sides; fifth segment as long as the two preceding united. Thighs moderately long; tibiæ strongly unguiculate at tip; tarsi narrow, third joint scarcely wider than second, not bilobed, last joint as long as the others united, claws simple, divergent, rather large.

It is singular to find in this genus a recurrence of the narrow tarsi already so frequently noticed in other tribes, without any important structural modification, but with an outline of body suggestive of a very different type.

1. C. grandicollis, n. sp.

Piceous, clothed with hair-like and narrow pale scales; beak, antennæ and legs brown. Beak not punctured, head sparsely punctured, with a larger frontal puncture. Prothorax coarsely punctured, with an elongate, smooth dorsal spot, attaining neither base nor tip; apical margin also smooth. Elytra with deep impunctured striæ, interspaces flat, each with a row of deep punctures; third interspace wider, with the punctures confused. Beneath coarsely punctured. Length 3 mm.; .12 inch.

One specimen, collected by me near the Rocky Mountains. The scales are partly abraded; on the elytra they remain only at the base and near the extremity of the fourth to the seventh interspaces.

CENTRINUS Sch.

After separating a certain number of species, which seem to indicate distinct and well-defined genera, there remains a tolerably numerous mass, which, although not entirely homogeneous, consists of species having in common the following characters. The study of foreign species may permit at a future time a farther subdivision, but the transition between the extreme forms seems so gradual, that I am unwilling, with my present knowledge, to indicate the manner in which this may be effected.

The beak is long and slender, cylindrical, and usually curved, but sometimes nearly straight; the antennal grooves commence about the middle, descend obliquely, and are wider, deeper and confluent behind. Mandibles small, flattened, pointed, prominent, and without teeth. Antennæ rather slender, funicle 7-jointed, joints 1–3 varying in length, 4–7 equal in length, not passing into the club, which is oval, somewhat pointed, pubescent and annulated. Prothorax narrowed and more or less constricted in front, without postocular lobes; prosternum long in front of the coxæ, which are rather widely separated; not emarginate in front, impressed or not, according to species. Elytra sometimes elongate with parallel sides, though usually narrowed from the humeri, so as to give a rhomboidal form of body; posterior callosity feeble, tips usually conjointly rounded, sometimes separately rounded, exposing in the latter case a small part of the pygidium, which is, however, horizontal, and not vertical, as in *Baris* and its allies. The middle and hind coxæ are widely separated; metasternum rather short, with wide episterna in the rhomboidal species; longer, with narrower episterna in the elongate species; but in both cases distinctly wider before and behind. Ventral surface ascending in some species, nearly horizontal in others; first and second joints longer than third and fourth; fifth sometimes longer, sometimes not longer than the fourth: first suture subsinuate, the others strongly angulated at the sides. Thighs unarmed, tibiæ not striate on the outer side, very feebly mucronate at tip; tarsi with the third joint very broad, bilobed, last joint long, with stout, divergent claws.

In the males of several species the prosternum just in front of the coxæ is armed with a slender process, which varies in length according to the individual, but not according to species.

A. Elytra separately strongly rounded at tip; pygidium partly exposed; posterior edge of prothorax deeply emarginate beneath in front of mesosternum.

Black, densely punctured; above pruinose,
with fine scales or hairs, beneath scaly;
scutellum clothed with white scales ..... 1. **scutellum-album.**

B. Elytra conjointly rounded at tip, or nearly so; pygidium not exposed, or very slightly visible; posterior edge of prothorax usually emarginate in front of mesosternum;* form subrhomboidal, side pieces of metathorax wide.

Emargination of hind margin of prothorax small 2.

Emargination of hind margin of prothorax deep; body densely clothed with coarse capillary scales; elytra sometimes with denuded spots... 2. **penicellus.**

2. Prothorax tubularly constricted in front.......... 3.

" moderately " " " .... 5.

Beak strongly punctured and striate; prothorax coarsely punctured......................... 4.

3. Beak nearly smooth; prothorax more finely punctured.................................. 3. **lævirostris.**

Beak strongly punctured; prothorax less finely punctured.............................. 4. **punctirostris.**

4. Sides of prothorax strongly rounded; prosternum deeply impressed in front of the coxæ, emarginate behind............................. 5. **striatirostris.**

Sides of prothorax oblique, feebly rounded; prosternum impressed near the apex, not emarginate behind.............................. 6. **modestus.**

5. Sides of prothorax much rounded................ 6.

" " oblique, feebly rounded........ 7.

6. Pubescence gray squamose .... 7. **perscillus.**

" " capillary, (prosternum not emarginate behind)............................ 9. **capillatus.**

7. Prothorax gradually narrowed in front.......... 8.

" more suddenly narrowed near the tip.. 8. **neglectus.**

8. Second joint of funicle equal to third; scales uniform .... 9.

Second joint of funicle longer than third; scales yellow and black, forming stripes............ 12. **lineellus.**

9. Prosternum with three impressions in front...... 10. **picumnus.**

Prosternum with one small impression near the apical margin.............................. 11. **perscitus.**

C. Elytra conjointly rounded at tip, or nearly so; pygidium not exposed or very slightly visible; posterior edge of prosternum not emarginate in front of mesosternum; form elongate.

Prosternum transversely impressed as usual by the subapical constriction...................... 2.

Prosternum with two slight ridges, indicating a broad but feeble pectoral groove.............. 8.

Prosternum foveate near the apical margin.......... 9.

2. Scales moderately large, quite evident........... 3.

" small, hair-like, inconspicuous .. .. 5.

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* The exceptions are *C. modestus, capillatus,* and perhaps *lineellus.*

3. Front coxæ not widely separated............. ... **4.**
“ “ widely separated, form more robust .. **13. griseus.**
4. Interspaces of elytra with double or confused rows of scales.................................... **14. decipiens.**
Interspaces of elytra with single rows of scales...... **15. lineicollis.**
5. Interspaces of elytra with single rows of punctures **6.**
“ “ “ confused “ “ **7.**
6. Rows of punctures very strong............ ..... **16. punctiger.**
“ “ fine........................ **17. nasutus.**
7. Prothorax suddenly constricted in front, beak curved.................................... **18. calvus.**
Prothorax less constricted in front, beak nearly straight .... **19. rectirostris.**
8. Prothorax very densely punctured............... **20. falsus.**
“ less “ “ .... **21. longulus.**
9. Prosternal impression single..................... **10.**
“ “ double..................... **22. concinnus.**
10. Elytral striæ deep; interspaces strongly punctured **23. confusus.**
“ “ fine; “ feebly “ **11.**
11. Prosternal impression quadrate................... **24. prolixus.**
“ “ small, round...... .... **25. confinis.**

1. **C. scutellum-album** Say, Curc. 21; ed, Lec. i, 287; *Baridius scut.* Germ. Sch. Curc. iii, 730.

An abundant species over the whole of the Atlantic district. Varies considerably in size (3–4.7 mm.; .12–.18 inch), the smallest specimens occurring in all parts of the country; also in form, some of the smaller specimens from Texas being less robust, with the sides of the prothorax less rounded; also in vestiture, which is sometimes denser and yellowish, and squamose upon the elytra, in specimens from Texas. The white scales of the scutellum are not unfrequently removed by abrasion. The antennæ are stouter than in the following species, and the second joint of the funicle of the antennæ is distinctly longer than the third; the prosternum is deeply transversely impressed, and is flattened behind the impression, but has no trace of spines in either sex. The metasternal episterna are wide; the fifth ventral is scarcely longer than the fourth. The anal segment is exposed in the ♂, and is slightly declivous. Of all the species in our fauna, this makes the nearest approach to *Baris*.

2. **C. penicellus.** *Curculio penicellus* Herbst, Käfer, vii, 29, Tab. 99, f. 6; *Baridius pen.* Say, Curc. 17; ed. Lec. i, 281; *Centrinus holosericeus* Gyll., Sch. Curc. iii, 760; *Baridius pubescens* Uhler, Proc. Acad. Nat. Sc. Phila. vii, 417.

New York to Florida and Louisiana. The vestiture is of narrow-pointed brassy yellow scales, or coarse flattened hairs, on the prothorax they point transversely towards the middle, which is slightly carinate; on the elytra they form three nearly regular rows, upon each of the densely punctured interspaces. In some specimens the elytra are uniformly clothed, without any denuded spots. The second joint of the funicle is as long as the first, but more slender. The elytra are conjointly rounded at tip, and the pygidium is not visible. The prosternum is transversely impressed and flattened, as in the preceding species, not armed in the ♂; the emargination in front of the mesosternum is wide and deep, limited by sharp angles. The metathoracic episterna are wide, and the fifth ventral but little longer than the fourth.

C. pistor Gyll., Sch. Curc. iii, 760; *Balaninus pistor* Germ., Ins. Nov. 295, and

C.(?) dilectus Harris, Trans. Hartf. Nat. Hist. Soc. i. 80,

Are unknown to me. I think it possible that the latter may be a large variety of *penicellus*; the former is perhaps the ♀ of the next.

3. **C. lævirostris**, n. sp.

Black, densely clothed with small gray scales, which are narrower but not hair-like upon the upper surface. Beak as long as the head and prothorax, slender, curved, opaque, smooth, slightly punctured and pubescent near the base; head feebly punctulate. Prothorax not wider than long, rapidly narrowed from the base, strongly rounded on the sides, very strongly tubularly constricted near the tip, bisinuate at base; scutellar lobe slightly emarginate; surface densely rather finely punctured, scales not directed transversely; dorsal line smooth, slightly elevated. Elytra conjointly rounded at tip, pygidium slightly visible (only in ♂?); striæ deep but not broad, interspaces flat, densely punctured; suture and alternate spaces clothed with paler scales. Antennæ with the second joint of funicle two-thirds as long as the first. Side pieces of metasternum wide; fifth ventral nearly as long as third and fourth united. Hind margin of prothorax beneath narrowly emarginate. Length 6.2 mm.; .25 inch.

♂. Prosternum with a very deep excavation in front of the coxæ, and armed each side of the cavity with a long curved horn: ♀ wanting.

Missouri, one specimen. This is the largest species in our fauna, and corresponds in size with *C. pistor* and *dilectus*; I do not feel disposed however, to refer it to either of them.

4. **C. punctirostris**, n. sp.

This species corresponds in all respects with *C. lævirostris*, except that the scales are of a uniform pale gray; the beak is stouter, especially at the base, coarsely punctured even at the tip, with a small smooth space at the base. and the punctures of the prothorax though dense, are somewhat larger. Length 6.2 mm ; .25 inch.

Colorado, one ♂. The horns of the prosternum are shorter, and more regularly curved.

5. **C. striatirostris**, n. sp.

More robust than the two preceding species. Beak not very slender, more curved near the base; shining, coarsely punctured, longitudinally rugose on the sides, strongly constricted at the base. Prothorax wider than long, much rounded on the sides, strongly tubularly constricted at tip; very coarsely and somewhat confluently punctured; scales sparse, white, narrow, directed transversely; dorsal line narrow; scutellar lobe broad, slightly emarginate. Elytra not wider than the prothorax, gradually narrowed behind the humeri, thinly clothed with white scales broader than those of the prothorax, tips separately but narrowly rounded; striæ deep, broad and punctured; interspaces narrow, with large punctures nearly arranged in single rows. Funicle of antennæ with the second joint half as long as the first. Beneath coarsely punctured, clothed not very densely with oval white scales. Hind margin of prothorax emarginate beneath; side pieces of metasternum wide; fifth ventral shorter than third and fourth united. Length 4.6 mm.; .18 inch.

Texas, Belfrage, one ♂. The prosternum is deeply excavated as in the two preceding species, but the horns are much shorter, and scarcely curved. This, however, may be an individual character.

6. C. **modestus** Boh., Sch. Curc. iii, 772.

Middle and Southern States. Similar in form to the preceding species, black, sprinkled with small oval white scales. Beak as long as the head and prothorax, stout, regularly curved, sparsely punctured. Prothorax wider than long, feebly rounded on the sides, which are oblique, strongly constricted at tip; densely, somewhat confluently punctured, with a narrow smooth dorsal line. Elytra conjointly rounded at tip; striæ deep, interspaces coarsely punctured. Prosternum with a well defined deep impression, rounded in front, extending nearly to the anterior margin; coxæ moderately widely separated, hind margin not emarginate; side pieces of metathorax wide; fifth ventral segment a little longer than fourth. Funicle of antennæ with first joint elongate, second a little longer than third. Length .4 mm.: .15 inch.

♂ with a small cusp each side, immediately before the front coxæ; abdomen flattened near the base; anal segment slightly visible on the under surface.

7. C. **perscillus** Gyll., Sch. Curc. iii, 762.

Kansas, one male. The scales are dirty gray, not linear but oval, and densely placed. The prothorax is wider than long, rapidly narrowed from the base, with the sides not very much rounded, and the tip only feebly constricted. The elytra are conjointly rounded at tip, and the pygidium is not exposed; the striæ are deep and punctured. The second joint of the funicle is as long as the first, the side pieces of the metasternum are wide, the fifth ventral is but little longer than the fourth, and the hind margin of the prothorax beneath is narrowly emarginate in front of the mesosternum. Length 3.5 mm.; .14 inch.

The prosternum is deeply excavated, and the horns are short and conical.

8. C. **neglectus**, n. sp.

Very similar to *C. perscillus*, but rather narrower, clothed with ochreous narrow scales. Prothorax scarcely wider than long, sides obliquely rounded, feebly constricted at tip; disc densely punctured; scales hair-like, directed transversely, dorsal line obsolete. Elytra scarcely wider than the prothorax, gradually narrowed from the humeri, tips conjointly rounded; striæ deep and wide, interspaces flat, densely punctured. Beneath covered with oval scales; antennæ and legs brown; prosternum as wide between the coxæ as in *C. perscillus*, emarginate in front of the mesosternum; side pieces of metasternum wide; fifth ventral scarcely longer than the fourth. Beak long, slender, curved, shining and sparsely pubescent, distinctly punctured; second joint of funicle nearly as long as the first. Length 2.5 mm.; .10 inch.

Louisiana and Kansas, four specimens. The prosternum is broadly but less deeply impressed; in the ♂ the horns are very short; in the ♀ the prosternum is flattened, but not concave.

9. **C. capillatus**, n. sp.

Similar in size and form to *C. perscillus*, but only thinly clothed with hair-like white scales on the upper surface, intermixed with oval scales on the under surface. Beak as long as the head and prothorax, slender, abruptly curved near the base, then nearly straight, shining, smooth, sparsely punctured near the base, frontal constriction very feeble; head convex, sparsely punctured. Prothorax wider than long, sides oblique, very slightly rounded, tip feebly constricted; disc densely punctured, scales directed transversely; base bisinuate, scutellar lobe rather large, truncate. Elytra somewhat wider than the prothorax, narrowed behind from the humeri, separately (though very slightly so) rounded at the tips; pygidium not exposed; striæ deep and broad, interspaces flat, densely punctured, each with two rather regular rows of hair-like scales. Prosternum not very wide between the coxæ, hind margin truncate in front of the mesosternum, not at all emarginate; side pieces of metathorax wide; fifth ventral longer than the fourth; antennæ with the first joint of the funicle long and slender, second two-thirds as long, equal to the third and fourth united. Length 3 mm.; .12 inch.

♂. Prosternum broadly and feebly concave; horns reduced to a small slender cusp; ventral surface flattened, fifth segment as long as the third and fourth united.

♀. Prosternum slightly convex, without horns; ventral surface convex, fifth segment a little longer than the fourth.

Texas, Belfrage, three specimens.

10. **C. picumnus.** *Curculio pic.* Herbst, Käfer, vii, 30; Tab. 99, f. 9; *Baridius pic.* Say, Curc. 17; ed. Lec. i, 281; *Centrinus olivaceus* Gyll., Sch. Curc. iii, 763; *Centrinus sutor* Harris, Trans. Hartford Nat. Hist. Soc. i, 81.

Abundant throughout the Atlantic region. Rather broader, and more regularly oval, densely clothed with narrow, ochreous scales, which are broader and paler on the under surface. Beak long, slender, regularly and strongly curved, frontal constriction deep. Prothorax wider than long, narrowed from the base, sides oblique, scarcely rounded, feebly constricted near the tip; surface densely punctured, scales directed transversely; scutellar lobe long. Elytra scarcely wider than the prothorax, gradually narrowed from the humeri, tips separately very slightly rounded, pygidium exposed at tip; striæ deep, punctured, interspaces flat, densely punctured, scales in about three nearly regular series on each interspace. Beneath densely punctured; prosternum transversely impressed, slightly concave near the tip and also each side; moderately wide between the coxæ; sharply emarginate in front of the mesosternum; metathoraic side pieces wide; fifth ventral segment scarcely longer than fourth. Funicle of antennæ with the first joint as long as the three following united; second not longer than third. Length 2.5 mm.; .10 inch.

♂. Prosternum with a long, nearly straight horn in front of each coxa; varies with the horns very short. Beak punctured and striate.

♀. Prosternum without horns. Beak sometimes punctured and striate, as in the ♂; sometimes feebly punctured and not striate.

11. **C. perscitus** Sch. Curc. iii, 764; *Curculio pers.* Herbst, Käfer, vii, 28; Tab. 99, f. 3.

Georgia and Texas; two specimens. Similar in size and form to the preceding, but the scales are more hair-like, and are more densely placed on the sides of the prothorax. The striæ of the elytra are finer, and the interspaces consequently wider. The front coxæ are moderately distant, and the prosternum is concave at the middle, but not impressed at the sides; the hind margin is very slightly rounded, not emarginate; the metathoracic side pieces are wide, and the fifth ventral is scarcely longer than the fourth. Funicle of antennæ rather stout, first joint as long as the three following; second scarcely longer than the third. Prosternum without horns in the ♂. Length 2.5 mm.; .10 inch.

12. **C. lineellus** Lec. Proc. Ac. Nat. Sc. Phil. 1859, 79.

Tejon, California; one female; Mr. Xántus. Enterely similar in form and size to the two preceding, but the scales are oval, and of two colors, sulphur-yellow and black; the first color, though paler, prevailing on the under surface; and forming also three broad vittæ on the prothorax. Scutellum black. Elytra with the whole of the second interspace; the third, except for the basal fourth; the fourth for the basal fifth; the sixth for the anterior half; the seventh and eighth for the posterior two-thirds covered with yellow scales, arranged in two or three rows on each interspace; striæ rather deep, punctured Prosternum convex, transversely impressed, as usual, but not concave; front coxæ widely separated. Metathoracic side-pieces wide; abdomen convex; fifth ventral not longer than fourth. Funicle of antennæ rather slender; second joint a little longer than the third, Length 2.5 mm.; .10 inch.

13. **C. griseus**, n. sp.

Less elongate than the following species, proportioned somewhat as

C. capillatus, but with the prothorax more rounded on the sides, and more constricted in front. Beak shorter than the prothorax, not very slender, regularly curved, punctured and striate; transverse frontal impression distinct; head convex, opaque, finely punctulate. Prothorax wider than long, sides parallel behind, much rounded in front, strongly constricted near the tip; disc coarsely and densely punctured, clothed with narrow, pale scales, directed transversely. Elytra feebly narrowed from the humeri, separately rounded at the tip; pygidium slightly exposed; striæ deep, interspaces rather narrow, punctured; each clothed with an irregular double series of narrow, white scales. Prosternum with the usual transverse impression, not foveate, hind margin not emarginate; front coxæ widely separated; metathoracic side pieces wide; fifth ventral segment nearly as long as the third and fourth united; antennæ with rather stout funicle, second joint scarcely longer than the third. Length 3.7 mm.; .15 inch.

Texas, Belfrage; one specimen. This is a deceptive and difficult species to identify, and would be equally well placed near *C. modestus* and *capillatus*.

14. **C. decipiens**, n. sp.

More elongate than the preceding, but otherwise closely resembling it. The beak is similarly curved and sculptured, but is longer. The prothorax is not constricted in front, and the scales are somewhat less narrow, though also directed transversely; the sides are much less rounded. The elytra are deeply striate, clothed with narrow, pale scales, arranged in rather confused single series on the inner interspaces, but with regular rows on the outer ones. The body beneath is densely clothed with oval pale scales; the prosternum is transversely impressed as usual, but also slightly foveate and flattened, though the fovea is concealed by the scales. The front coxæ are not widely separated, the metathoracic side pieces are wide, and the fifth ventral segment is nearly as long as the third and fourth united. Funicle of antennæ rather slender; second joint a little longer than third. Length 3 mm.; .12 inch.

Florida and Texas; two specimens.

15. **C. lineicollis** Boh., Sch. Curc. viii, 1st, 221.

Illinois, Texas, South Carolina, also occurs in Mexico. An elongate species, thinly clothed with small, narrow, gray scales, which are almost hair-like on the upper suface; and rather dense at the middle and sides of the prothorax; on the elytra they are arranged in single series on each interspace.

The beak is as long as the prothorax, curved, sparsely punctured, and striate at the sides. Prothorax densely punctured, longer than wide, feebly constricted near the tip. Elytra conjointly rounded at tip, striæ deep, interspaces rugosely punctured. Prosternum transversely impressed in front, not emarginate behind; front coxæ only narrowly separated; metathoracic side-pieces rather narrow ; fifth ventral nearly as long as third and fourth united. Funicle of antennæ rather stout; first joint as long as the two following; second a little longer than the third. Length 2.5 mm.; .10 inch.

16. **C. punctiger**, n. sp.

Elongate oval, narrowed before and behind, dull black, nearly glabrous above. Beak brown, as long as the prothorax, slender, curved, punctured towards the base, frontal impression distinct. Prothorax as wide as long, much narrowed in front, broadly but not abruptly constricted, sides rounded; disc coarsely and deeply punctured, dorsal line narrow. Elytra with deep punctured striæ, interspaces each with a row of deep punctures; tips nearly conjointly rounded. Beneath coarsely and densely punctured, scarcely pubescent; prosternum convex, very deeply constricted in front, not emarginate behind; front coxæ widely separated; metathoracic side pieces rather narrow; fifth ventral nearly as long as third and fourth united. Legs and antennæ brown, funicle rather slender; second joint scarcely longer than third; club rather shining for half its length, annulated only towards the tip. Length 3 mm.; .12 inch

Texas, Belfrage; one specimen. By the structure of the antennal club this species approaches *Baris*, but the beak and antennæ are slender, and the ventral segments are those of the present genus.

17. **C. nasutus.** *Baridius nasutus* Lec., Pr. Acad. Nat. Sc. 1859, 79.

Tejon, California; two specimens. Beak slender, curved, punctured and striate; prothorax longer than wide, broadly rounded on the sides, narrowed in front of the middle, feebly constricted near the tip; rather closely punctured, shining, sparsely pubescent. Elytra with deep punctured striæ, interspaces with single rows of small punctures and very fine hairs; tips conjointly rounded. Beneath not coarsely but rather densely punctured. Prosternum transversely impressed as usual, not emarginate behind; front coxæ widely separated; metathoracic side-pieces rather narrow; ventral segments less punctured, with a small cusp at the middle of the hind margin of the first, where the suture is effaced; fifth segment as long as the third and fourth, more densely punctured. Antennæ with the second joint of funicle a little longer than third. Length 4 mm.; .16 inch.

I refer to this species a much smaller specimen (2.5 mm.; .10 inch) from Texas.

18. **C. calvus**, n. sp.

Elongate oblong, dull black, thinly clothed with fine, short hairs, which, on the under surface, become scale-like. Beak as long as the prothorax, not slender, slightly curved about the middle, nearly straight at base and tip, strongly striate and punctured; front not transversely impressed; head feebly punctulate. Prothorax scarcely wider than long, sides nearly straight and parallel for more than half the length, then suddenly rounded and tubularly constricted; surface densely, not coarsely punctured, with indistinct dorsal line; base nearly straight. Elytra but little wider than the prothorax, sides parallel behind the humeri, then broadly rounded; tips separately rounded, exposing a small part of the pygidium, which is slightly declivous, but by no means vertical; striæ deep, scarcely punctured, interspaces wide, confusedly and rugosely punctured. Beneath, rather densely, not coarsely punctured; prosternum rather flat, less deeply impressed in front than usual, very slightly emarginate behind; hind margin not emarginate; front coxæ moderately widely separate; metathoracic side pieces rather narrow; fifth ventral segment as long as the two preceding; second joint of funicle longer than the third. Length 4.5–5.2 mm.; .18–.21 inch.

♂. First ventral segment flattened and slightly concave at the middle; prosternum without spines.

♀. Ventral surface convex, not impressed; form a little stouter; beak more slender, less deeply sculptured.

Georgia and Florida; two specimens. The description is drawn from the ♂, which is the larger specimen.

19. **C. rectirostris**, n. sp.

More elongate, black, nearly glabrous, shining. Beak longer than the head and prothorax, nearly straight, slender, sparsely punctured, with a small basal indentation; head convex, feebly punctulate. Prothorax scarcely longer than wide, slightly narrowed from the base forwards, then more narrowed and rounded, broadly constricted near the tip; surface strongly punctured, dorsal line narrow, distinct. Elytra a little wider than the prothorax, sides parallel behind the humeri, then rounded; tips separately rounded, exposing a small part of the pygidium; striæ deep, narrow, interspaces wide, finely rugosely punctured. Beneath slightly pubescent, not coarsely punctured; more sparsely on the first and second ventral segments. Prosternum transversely impressed in front, not emarginate behind; front coxæ moderately widely distant; metathoracic side-pieces not very narrow; fifth ventral segment as long as the two preceding united. Funicle of antennæ slender, second joint nearly as long as the first. Length 4.8 mm.; .19 inch.

South Carolina and Illinois; three specimens. I have adopted the name given to it by Dr. Zimmermann. The beak of the ♂ is more strongly punctured and striate, and a little shorter.

20. **C. falsus**, n. sp.

Elongate oval, dull black, clothed not very densely with narrow yellowish scales, which are broader and paler on the under surface. Beak as long as the head and prothorax, more curved at the base, not very slender, strongly punctured (♂); sparsely punctured (♀); head punctured, front with a small fovea, not transversely impressed. Prothorax wider than long, slightly narrowed from the base, rounded and feebly constricted towards the tip; densely and strongly punctured; dorsal line narrow, distinctly elevated; hairs transversely arranged, base nearly straight. Elytra slightly separately rounded at tip, apex of pygidium exposed; striæ deep, interspaces wide, densely and confusedly punctured, hairs not arranged in rows. Beneath densely punctured, prosternum transversely impressed as usual, and longitudinally concave; apical part foveate, and with a small ridge each side of the fovea; hind margin not emarginate; front coxæ moderately distant, metathoracic side pieces rather wide, fifth ventral segment hardly longer than the fourth. Funicle of antennæ slender, first joint as long as the three following; second a little longer than the third; club less elongate, stouter, pubescent, less distinctly annulated. Length 4 mm.; .16 inch.

Middle and Southern States; four specimens.

21. C. **longulus**, n. sp.

This species closely resembles *C. falsus*, but is still more elongate and clothed with hair-like scales both above and beneath. The prothorax is not wider than long, and is less constricted at the tip; the punctures are less dense, and the dorsal line is indistinct. The prosternum is more distinctly sulcate, and the fifth ventral segment is distinctly longer than the fourth. Length 4 mm.; .16 inch.

Texas, Belfrage; one ♂. The beak is nearly smooth, punctured only towards the base. The first ventral segment is slightly flattened.

22. C. **concinnus**, n. sp.

Elongate, black, with a slight bronzed tint, thinly clothed with white hairs, becoming capillary scales beneath. Beak as long as the prothorax, slightly curved, frontal impression distinct. Prothorax a little longer than wide, narrowed and feebly constricted in front, coarsely but not deeply punctured, finely alutaceous. Elytra parallel, conjointly rounded at tip; striæ fine, interspaces wide, feebly punctulate. Beneath rather coarsely punctured; prosternum with two small foveæ near the tip; not emarginate behind; front coxæ moderately distant; metathoracic side pieces narrow, fifth ventral segment longer than the fourth. Funicle of antennæ rather stout and short, second joint not longer than third. Length 1.8–2.5 mm.; .07–.10 inch.

New York, Florida, Texas. The beak is striate and more deeply punctured in the ♂.

23. C. **confusus** Boh., Sch. Curc. iii, 740; Mann., Bull. Mosc. 1843, 2d, 293.

Southern and Western States; also found in California, according to Mannerheim. Elongate, dull black, thinly clothed with white hairs, which are very small and inconspicuous above, and scale-like beneath. Beak as long as the prothorax, slender, slightly curved. Prothorax strongly and densely punctured; dorsal line narrow, smooth; sides slightly oblique, rounded in front, and feebly constricted. Elytra with deep striæ, interspaces strongly punctulate, tips conjointly rounded. Beneath coarsely punctured, prosternum with a rounded impression near the tip; not emarginate behind; front coxæ moderately separated, metathoracic side pieces rather narrow; fifth ventral segment a little longer than the fourth. Funicle of antennæ stout, second joint scarcely longer than third. Length 2.8 mm.; .11 inch.

♂. Prosternum armed each side in front of the coxæ with a long straight horn; beak more distinctly punctured and striate. Varies with the horns short.

♀. Prosternum flattened, but without horns; beak smoother, punctured towards the base.

Two larger specimens from Florida have the prothorax less densely punctured, and the fifth ventral as long as the third and fourth united: in the ♂ the horns are merely short acute cusps. They may indicate a distinct species, but I prefer not to define it as such for the present.

24. **C. prolixus**, n. sp.

Elongate, shining black, with a slight bronzed lustre, nearly glabrous above. Beak slender, slightly curved, as long as the prothorax; frontal impression wanting. Prothorax as wide as long, narrowed in front and rounded upon the sides, broadly but not deeply constricted in front; disc less convex than usual, sparsely punctured. Elytra very elongate, parallel, conjointly rounded at tip; striæ fine, interspaces wide, with small distant fine punctures; disc vaguely impressed behind the base. Beneath slightly pubescent, not deeply punctured, prosternum broadly concave, with a small square impression near the tip; front coxæ not widely separated; metathoracic side pieces narrow; ventral segments very sparsely punctured; fifth as long as the third and fourth united. Funicle of antennæ rather slender, second joint hardly longer than third. Length 4 mm.; .15 inch.

Massachusetts and Illinois; three specimens. Somewhat resembles *C. rectirostris*, but is smaller, and quite different by the characters given above.

25. **C. confinis**, n. sp.

This species exactly resembles *C. concinnus* in size, form and sculpture, but differs by the finer pubescence, which is almost inconspicuous on the upper surface, and by the prosternum having one small but deep round fovea near the tip, instead of two approximate ones. Length 2.3 mm.; .09 inch.

New York; one specimen.

ZYGOBARIS n. g.

Body resembling in form a small robust *Centrinus* (e. g. *picumnus*), but very coarsely sculptured and not densely clothed with scales. Beak as long as the head and prothorax, slender, cylindrical, curved; not transversely impressed at the base; antennal grooves commencing nearly one-third from the tip, descending obliquely; eyes rather large, transverse, not convex, finely granulated, front not wider than the beak; head rather small. Antennæ with the first joint of funicle elongate, and stouter than the second; 2–7 gradually stouter, merging into the club, which is elongate-oval, pointed, pubescent and regularly annulated, the basal joint not being unduly large. Prothorax strongly narrowed in front, feebly constricted, and without postocular lobes; base bisinuate; prosternum long in front of the coxæ, which are widely separated, impressed near the front margin.

Elytra wider at base than the prothorax, humeri rounded, sides obliquely narrowed behind the humeri, tips conjointly rounded; pygidium entirely covered. Middle and hind coxæ widely separated, metasternum longer than first ventral, first and second ventral segments each equal to the third and fourth united; the fifth but little longer than the fourth; first ventral suture partially effaced, second and third slightly angulated at the sides. Legs rather long, tibiæ moderately mucronate at tip; tarsi with third joint very broad, bilobed; last joint rather long, with the claws small; connate at base.

Shining black, elytral striæ very coarsely punctured.... 1. **nitens.**
Dull black, elytral striæ deep, impunctured............ 2. **conspersa.**

1. **Z. nitens**, n. sp.

Robust, subrhomboidal, shining black, thinly sprinkled with small white scales. Beak strongly punctured, a little longer than the head and prothorax, slender, curved, not thicker at base, where it is slightly constricted. Prothorax very coarsely but not densely punctured. Elytra with fine striæ, marked with large, distant punctures, interspaces nearly flat, each with a row of equally large but more distant punctures. Beneath very coarsely punctured; claws connate for more than half their length. Length 2.5 mm.; .10 inch.

Key West, Florida; one specimen, Mr. Burgess.

2. **Z. conspersa**, n. sp.

Less robust, subrhomboidal, dull black, moderately densely clothed with yellow-brown hair, with rows of small distant white scales upon the elytra. Beak stouter than in the preceding, slightly thicker at base, cylindrical, curved, not longer than the prothorax, not impressed at base; finely punctured and pubescent. Prothorax not wider than long, gradually narrowed in front, sides nearly straight, slightly rounded near the tip; surface strongly and densely punctured; base bisinuate. Elytra wider behind the base, humeri obliquely rounded, striæ deep, interspaces elevated, flat, not very wide, densely punctured. Beneath punctured, rather densely clothed with pale brown scales; claws approximate, small, slightly connate at base. Length 2 mm.; .08 inch.

Illinois; B. D. Walsh; seven specimens. The funicle of the antennæ is stouter than in the preceding, and the club is less elongate. The general form is less robust and more rhomboidal.

BARILEPTON n. g.

Body very elongate, nearly filiform, clothed with pale scales. Beak not slender, as long as the prothorax, suddenly curved near the base, then very slightly curved; base somewhat stouter, feebly impressed; head large, convex. Antennal grooves commencing about the middle, deep, descending obliquely. Antennæ with funicle 7-jointed, first joint elongate, stouter than the second; 2–7 nearly equal in length, gradually wider, club rather large, oval, pubescent, annulated. Prothorax a little longer than wide.

sides parallel, rounded, and feebly constricted near the tip; base nearly straight. Elytra elongate, very little wider than the prothorax, conjointly rounded at tip, pygidium completely covered. Prosternum moderately long in front of the coxæ, which are very slightly separated; mesosternum rather narrow, metasternum long, hind coxæ widely separated. First, second and fifth ventral segments long, third and fourth together a little longer than the second; first suture partly obliterated at the middle; the others are distinctly curved at the sides. Legs rather slender, tibiæ feebly but distinctly mucronate; tarsi with the third joint very broad, bilobed, last joint rather long, with a single claw.

1 **B. filiforme**, n. sp.

Elongate, nearly filiform, black, clothed with small pale scales. Beak naked, shining, punctured; head thinly pubescent, punctulate. Prothorax rather densely, but not very strongly punctured, with the scales lying transversely, as in many *Centrinus*. Elytra with fine striæ, and flat, alutaceous interspaces. Legs brownish. Length 2.5–3.3 mm.; .10–.13 inch.

Virginia, Illinois, Nebraska; three specimens.

EUCHÆTES n. g.

Body resembling in form a robust *Centrinus*, but with comparatively larger prothorax, more rounded on the sides; covered with a dense crust of dirt-colored scales, and with very long stiff erect bristles. Beak nearly as long as the body, much stouter from the base to the insertion of the antennæ, then slender and strongly curved for the remaining two-thirds of the length, base constricted beneath, and somewhat protuberant; antennal grooves confluent behind; eyes transverse, finely granulated; head immersed in prothorax nearly to the eyes. Antennæ with the scape extending to the eyes, gradually thickened externally; funicle 7-jointed. slender, longer than the scape; first and second joints longer, equal; seventh broader, rather closely connected with the club, which is elongate-oval, pubescent, and indistinctly annulated. Prothorax rounded on the sides, slightly bisinuate at base, narrowed and tubularly constricted at tip, without postocular lobes. Scutellum larger than usual. Elytra narrowed behind, tips separately rounded, pygidium not exposed. Prosternum truncate in front, strongly impressed transversely, not foveate, nor flattened; front coxæ very widely separated; middle and hind coxæ very widely separated; side pieces of mesothorax of the same form as in *Centrinus*; those of the metathorax narrow. First and second ventral segments very large, third and fourth united shorter than either, fifth a little longer than fourth. Legs moderate, thighs sinuate, and somewhat clavate; tibiæ nearly as long as the thighs, straight, strongly unguiculate at the outer side of the apex; tarsi rather long, slender, third joint not wider than the second; fourth joint as long as the others united, with rather large, divergent, simple claws.

This is one of the most remarkable insects in our fauna, from the length and stiffness of the bristles, which are almost spiniform.

1. **E. echidna**, n. sp.

Oval, not convex, narrowed before and behind, covered with a crust of dirt-colored scales, and with long stiff bristles, less evident on the under surface. Prothorax very uneven; elytra with narrow striæ, interspaces wide. Outer part of beak naked, brown, shining, somewhat punctured. Length 2.5 mm.; .10 inch.

Illinois; one specimen given by Dr. S. V. Summers to Dr. Horn.

PLOCAMUS n. g.

Of the form of an elongate *Centrinus*, clothed with a dense crust of gray scales, with short erect bristles intermixed. Beak as long as the head and prothorax, slender, curved, slightly and gradually thickened behind the antennæ, which are inserted one-third of the length from the base; eyes transverse, finely granulated. Antennæ similar to those of *Euchætes*, but with the funicle shorter and less slender; second joint not longer than third. Head less immersed in the prothorax; the latter is scarcely rounded on the sides, which are oblique, very strongly constricted in front, without post-ocular lobes, slightly bisinuate at base, scutellar lobe indented, and slightly emarginate. Scutellum rather larger than usual. Elytra a little wider than the prothorax, sides parallel, regularly rounded at tip. Under surface and legs, exactly as in *Euchætes*.

P. hispidulus, n. sp.

Elongate, blackish brown, densely clothed with a crust of gray scales, with short, erect pale bristles. Beak brown, naked beyond the antennæ, which are also brown. Prothorax somewhat uneven, deeply and densely punctured. Elytra somewhat clouded with darker gray, especially by a transverse spot about the middle; striæ deep, interspaces not wide, slightly convex; humeri oblique, obtuse, scarcely rounded. Length 2 mm.; .08.

Southern States. I am indebted to Mr. Ulke for several specimens found at Washington, D. C. I have adopted the name under which it appears in Dejean's Catalogue.

Tribe XX. HORMOPINI.

The sub-family of genuine *Curculionidæ* fitly closes with a very anomalous insect, which while having relations with several of the earlier tribes, exhibits in addition a character which is otherwise seen in one of the sub-families of the *Calandridæ*. The eyes, namely, are very large, transverse, and coarsely granulated; they are widely separated above, but are nearly contiguous beneath. It follows from this that the antennæ in repose must be received in front of the eyes, which therefore form as it were a collar beneath; and the antennal grooves, which are deep and oblique, attaining the eyes near the upper end, are suddenly and acutely flexed beneath, forming a deep, transverse excavation in front of the eyes.

The beak is shorter than the prothorax, stout, somewhat flattened, a little wider at tip than base; the mandibles are rather flattened, acute at tip, toothed on the inner side. The gular peduncle is small and narrow, emarginate at tip; the mentum is nearly round, and the ligula and palpi are not prominent; maxillæ exposed. Antennæ inserted near the tip of the beak, geniculate, scape long, slender, slightly clavate, funicle somewhat stout, first joint long, clavate, equal to the four following; 2–7 short, outer ones a little wider, club small, oval, pubescent, annulated. Prothorax rounded at the sides and base, truncate in front, without postocular lobes; prosternum feebly emarginate beneath, front coxæ contiguous. Elytra oblong-oval, a little wider than the prothorax, humeri rounded, pygidium entirely covered; scutellum small, rounded. Mesosternum moderately wide, middle coxæ separated, side pieces diagonally divided, not ascending between the elytra and base of prothorax. Metasternum rather long, side pieces narrow; hind coxæ moderately separated. Ventral segments first and second longer, separated by a slightly arcuate distinct suture; third and fourth short, separated by straight sutures; fifth as long as third and fourth united, broadly rounded behind. Legs rather short, stout; thighs thick, not clavate, sinuate beneath near the tip, not toothed; tibiæ obliquely truncate at tip, with a small hook at the inner apical angle; tarsi two-thirds as long as the tibiæ, dilated, spongy beneath, third joint broad, bilobed; fourth joint not elongate, slender, with small, approximate claws, which are slightly connate at base.

HORMOPS n. g.

The single species representing this genus and tribe in our fauna, is a small, inconspicuous black insect, thinly clothed with rather coarse yellow hair, and reminds one in general appearance of the Erirhine genus *Proca*? (p. 162). The characters as above detailed are quite anomalous, and no further generic description is at present necessary. It is possible that it may have relations with some of the anomalous genera placed by Mr. Wollaston among the *Cossonidæ*, but as I have had no opportunity of studying them in nature, I can but timidly suggest the propriety of comparing this genus with those genera of *Cossonidæ* in which the eyes are disposed to become confluent beneath. The entire facies of this insect is so purely Curculionideous that (the sexual characters being unknown), I would be unwilling to place it in any other family.

1. **H. abducens**, n. sp.

Brownish black, not shining, thinly clothed with yellow pubescence, head and beak densely punctured; prothorax wider than long, rounded on the sides, feebly constricted near the tip, broadly rounded at the base; strongly but not very coarsely or densely punctured, rather shining, without distinct trace of dorsal smooth line. Elytra wider than prothorax, feebly emarginate at base; humeri rounded, sides slightly rounded, tips conjointly broadly rounded; disc somewhat flattened, striæ well impressed, slightly punctured, interspaces nearly flat, punctulate. Beneath strongly and densely punctured, last ventral more finely punctured; pubescence similar to that of the upper surface. Length 4 mm.; .15 inch.

Capron, Florida; April; Messrs. Hubbard and Schwarz; one specimen.

Subfamily V. BALANINIDÆ.

The single genus which constitutes this subfamily has been heretofore arranged as a tribe, in the vicinity of *Anthonomini*. It differs, however, from that tribe, as from all other Coleoptera, known to me by the movement of the mandibles being vertical instead of horizontal;* the mandibles are short, pyramidal and acute, and the condyle is on the upper side; the teeth seen in most Curculionidæ are wanting; the inner edge is more convexly curved than the outer, so that in the ordinary position, the points seem slightly divergent. In general appearance, as well as by the extension of the mesothoracic epimera, so as to give an oblique outline to the elytra near the base, this subfamily seems to me to approach *Centrinus* more than *Anthonomus;* the result of this obliquity is that the tenth elytral stria commences at the margin, opposite the anterior end of the metathoracic episterna, as in all *Barini*.

The beak attains in length and attenuation the greatest development; in the ♂ it is rarely shorter than the body; in the ♀ it is frequently twice the length, and is used to make the perforation into which the egg is subsequently introduced. The great thickness of the husks of the fruits (chestnuts, walnuts, hickory nuts, &c.), depredated on by these insects, necessitates a very long perforating instrument to reach the kernel, upon which the larva feeds.

The mouth organs are small, the gular peduncle very long and narrow. The antennæ are inserted a little before the middle (♂), or behind the middle (♀) of the beak, and are very long and slender; the funicle is 7-jointed; the first joint is either longer or shorter than the second, and the outer joints are gradually a little less elongated; club elongate-oval, pointed, annulated and pubescent. Eyes rather large, flat, nearly rounded, finely granulated. Prothorax rather long in front of the coxæ, which are contiguous; broadly emarginate in front, without postocular lobes; pronotum rapidly narrowed in front, sides rounded, base slightly bisinuate. Scutellum distinct. Elytra narrowed behind, tips separately rounded, pygidium more or less exposed. Side pieces of mesothorax attaining widely the base of the prothorax, and truncating the humeral outline of the elytra; metathoracic episterna narrow, dilated in front. First ventral segment longer than the second, and closely united with it; the others are nearly equal in length. Middle coxæ moderately distant, hind coxæ widely distant, not attaining the elytral margin. Legs long, thighs clavate and strongly toothed in our species; tibiæ slender; truncate at tip, not mucronate; tarsi dilated, claws divergent, toothed.

BALANINUS Germ.

I have nothing to add to the excellent synopsis of our six species given by Dr. Horn, as above cited.

B. porrectus Boh., Sch. Curc. vii, 292 still remains unknown.

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*Horn, Proc. Am. Phil. Soc., 1873, 457.

Family VII. BRENTHIDÆ.

Mouth organs very different, according to genus and sex; maxillæ, ligula and palpi concealed in the species of the first sub-family in our fauna by the mentum, which in the ♂ is transverse and concave, in the ♀ narrow and convex. Mandibles in ♂ curved, flattened, pointed, more or less toothed on the inner edge; in the ♀ stout, small, pincer-shaped, toothed on the apical edge. Maxillæ exposed in *Cyladidæ* in both sexes, mentum oblong, and supported on a short gular peduncle, which is wanting in true *Brenthidæ;* mandibles short, pincer-shaped.

Antennæ inserted in lateral foveæ at a greater or less distance in front of the eyes, according to genus and sex; not geniculate, 11-jointed in true *Brenthidæ*, 10-jointed in *Cyladidæ;* outer joints finely pubescent and sensitive; basal joint stouter and a little longer than the second.

Head elongated, constricted behind, except in *Cylas;* eyes rounded, small, not granulated; labrum wanting.

Prothorax very elongate, truncate before and behind, without trace of postocular lobes; turned into a peduncle behind, with a broad basal bead; prosternum very long in front of the coxæ; prosternal sutures entirely obliterated; coxæ separate in *Brenthidæ*, conical, prominent, and contiguous in *Cylas;* in both the median suture behind the coxæ is very evident.

Mesosternum moderately long, side pieces diagonally divided, epimera pointed in front, not attaining the base of the prothorax; coxæ rounded, separate (*Brenthidæ*), nearly contiguous (*Cylas*).

Metasternum very long, episterna narrow; hind coxæ transverse oval, separated.

Elytra elongate, covering entirely the pygidium, with a fold on the inner surface close to the margin, which commences near the base, and diverges obliquely near the tip, and extends to the sutural edge in *Brenthidæ*, and nearly there in *Cylas*. Wings well developed.

Abdomen with five ventral segments, of which the first and second are very long, and united by an indistinct suture; third and fourth short, fifth a little longer, flat, rounded behind; sutures straight. Dorsal segments membranous, except the last, which is corneous; anal segment of ♂ rather large, rounded. The acute edge of the ventral segments and of the metathorax is prominent and fits, as usual, into the elytral groove.

Legs not slender, moderate in length; thighs clavate, front tibiæ sinuate, and obliquely grooved on the inner side in *Brenthidæ*, and armed with a hook on the outer tip, and a spine on the inner; middle and hind tibiæ truncate at tip, with two small fixed spurs. In *Cylas* the tibiæ are all slender, straight and not mucronate at tip. Tarsi spongy pubescent beneath, with the third joint bilobed. Claws large, simple and divergent, except in *Cylas*, where they are small and connate at base.

This highly specialized family is the last of those in which the male is provided with an additional dorsal segment. The mouth organs vary to a greater degree than they do in *Curculionidæ*, though usually the mentum is developed to such an extent as to conceal the ligula and labial palpi. Of the genera known to me *Cylas* is the only one in which the maxillæ are exposed by the mentum not filling completely the buccal cavity, though other cases are mentioned by Lacordaire.

But what is most curious, is that while the mandibles of the ♀ preserve the pincer-form seen in many *Curculionidæ*, and the beak is slender, and in some species extremely long, for the purpose of performing its function as an accessory organ of generation,* in the ♂ the mandibles assume a flat, curved, and pointed form, resembling those of ordinary Coleoptera. This sexual character is exhibited even in those genera in which the beak of the ♂ is nearly as slender, and the mouth as small as in the ♀.

The explanation of this difference in the mandibular structure is afforded by the interesting remarks of Mr. A. R. Wallace, concerning the wonderful pugnacity of the ♂ ♂ when in proximity to the ♀. An excellent account of the assistance given by the ♂ to the ♀ when she is occupied in boring the hole in which the egg is placed, is also given by C. V. Riley,† from observations made by his correspondent W. R. Howard, of Forsyth, Missouri.

These combats, however, result in no injury to either of the parties engaged; the dense chitinous covering affords a perfect protection; the weaker male, overcome by exhaustion, eventually flees, and leaves to his more vigorous victor the honorable task of guarding and assisting the fair object of strife in her efforts to preserve the species.

The habits, therefore, of these insects, as well as their peculiarities of structure, deserve a closer attention than has yet been given to them.

The smooth eyes, the reticulations of which are seen only through the transparent integument, and the form of the front tibiæ, indicate a resemblance, though a remote one, to *Rhyssodidæ*, such as might perhaps exist among objects of quite different nature originating in the same period of time. The geographical distribution of the *Brenthidæ* is also favorable to the idea that they represent a tolerably ancient form of life.

The great extension of the longitudinal axis of the body exceeds in some members of this family any proportion that occurs in other *Coleoptera;* and it is singular to see that a character, which usually indicates feebleness of development, is here associated with densely chitinized integuments, and great complication of domestic life.

The family divides itself naturally into two subfamilies, the characters of which have been sufficiently exposed above.

Antennæ 11-jointed, last joint oval, pointed, not larger, **BRENTHIDÆ.**
Antennæ 10-jointed; last joint very elongate,.......... **CYLADIDÆ.**

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*Harris, Ins. Inj. Veg. 3d ed. 63; Wallace, Malay Archipelago (ed. Harper), p. 482; Riley, Sixth Annual Report, Ins. of Missouri, p. 115. These authors mention that the ♀ makes with her beak deep perforations in the tree, and deposits an egg in each one of them; Lec., Am. Journ. Sc. and Arts, 1867.

†Sixth Annual Report on the Noxious, &c., Insects of Missouri, 1874, p. 415.

Subfamily I. BRENTHIDÆ (genuini).

Of this family two genera belong in the faunal limits treated of in this memoir, though one of them (*Brenthus*), is in a political sense extra-limital, having occurred in Lower California.

These two genera represent in the arrangement of Lacordaire separate groups, but in the plan of subordination of characters herein adopted, they seem to indicate what I have called tribes, which may be distinguished by the sexual and other differences in the head, as well as by the form of the prothorax.

Beak very dissimilar in the two sexes; antennæ not very remote from the eyes, rather slender, not compressed, nor clavate; prothorax convex, not grooved.. **ARRHENODINI.**

Beak slender in both sexes; antennæ far distant from the eyes, somewhat thickened and stouter externally; prothorax deeply grooved towards the base.......... **BRENTHINI.**

Tribe I. ARRHENODINI.

The genus *Eupsalis*, represented in our fauna by a single species, differs from *Arrhenodes* by the brilliant lustre of the surface, and by the hind part of the head being less prominent; in view of the magnitude of the variations in the ♂ ♂, which I have mentioned below, I have great doubt of the generic value of these characters; nevertheless, my opinion can only be tested by a careful study of foreign species, which would interrupt the progress of the present memoir, and is, moreover, not essential for the elucidation of our own fauna.

The distribution of *Eupsalis*, even as thus limited, is remarkable; one species in North America, one species in Guinea, and one in Madagascar, and perhaps one in Brazil. It is worthy of remark in this connection, that the genus *Amorphocephalus*, the only Brenthide found in Europe, is also represented in Australia.*

EUPSALIS Lac.

1. **E. minuta** Riley, 6th Mo. Report, 113; (larva correctly determined, described and figured); *Curculio minutus* Drury, Ins. i, 95, Tab. 42, f. 3, 7, name given in index, vol. ii, (♀); Herbst, Käfer, vii, 200; Tab. 108, f. 9, (♀); Oliv. Enc. Méth. ii, 192; *B. maxillosus* Oliv. Ins. iv, No. 84, Tab. 1, f. 1, and Tab. 2, f. 17, (♂♀); Gyll., Sch. Curc. i, 326.

B. septemtrionis Herbst, Käfer, vii, 183, Tab. 108, f. 5, (♂); *B. brunneus* Panzer, ed. Voet. iv, 44; *B. distans* Panzer, ibid.

B. (*Arrhenodes*) *septemtrionis* Harris, Ins. Inj. Veg. 3d ed. 68; (larva erroneously determined and described); *Eupsalis maxillosus* Horn, Tr. Am. Ent. Soc. iv, 127.

Abundant from Lake Superior to Texas, and from New England to Colorado; bores into the heart wood of various oaks, usually after they have been felled, though sometimes while the tree is still living; the white, the black, the red and the post oaks are mentioned as those which are known to be attacked. By some curious inadvertence, Olivier in the Encyclopédie Méthodique cites for this species No. 84, plate ii, f. 9; a totally distinct species, which in the text (v, 439) is named *B. militaris*.

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*Lacordaire, Gen. Col. vii, 423.

A description of this very well known insect is here unnecessary, but a notice of the variations which I have observed in the head of the males may be of interest.

The females vary in length from 6.5 to 14 mm.; .25 to .56 inch., from the eyes to the tip of the elytra. The head is rather strongly constricted immediately behind the eyes, which are convex and prominent. Immediately in front of each eye is a deep fovea; and in advance of them is a deep frontal excavation; the ridges above the insertion of the antennæ are prominent, and not angulated; the beak in front of the antennæ is as long as the joints 1–9 of the antennæ, which are shorter and stouter than in the ♂.

The males vary in length from 7.2 to 17 mm.; .28–.67 inch, from the eyes to the tip of the elytra. The head affects three different forms, which seem to be independent of size:

1. The head is suddenly, but not strongly constricted behind the eyes, with the lateral angles obtuse, but distinctly outlined; the ridges above the antennæ are very prominent, angulated behind, and separated from the front by a deep impression; the frontal impression is large and deep, and the median elevation in it is feeble; the beak in front of the antennæ is strongly dilated, much wider than long, with scattered elevated granules, and with a well developed ridge each side, which is suddenly more elevated at its posterior end; there are also two shallow impressions. The mandibles are as long as the beak in front of the antennæ; the cusp on the inner side is distinct and the apex of the right mandible has three cusps, that of the right but two. This form occurs in Michigan and Georgia.

2. The beak in front of the antennæ is not transverse, but fully as wide as long; the other characters as in (1). This form occurs in Kansas and Texas.

3. The beak in front of the antennæ is nearly twice as long as wide, the lateral ridges less developed, the granulations more numerous, the mandibles comparatively shorter and stouter; the frontal impression more elongated, with the median elevation more distinct; the ridges above the insertion of the antennæ are less prominent, not angulated behind, and the head is less suddenly constricted behind the eyes, with the angles so much rounded as to be nearly effaced.

These characters are somewhat similar, as regards the development of the supra-antennal ridges to those observed in *Lucanidæ*, but in the variation of the length of the beak are rather anomalous. They indicate, however, the propriety of recasting the classification of this family, and defining the genera and species by the invariable characters of the female, rather than by the perhaps individual modifications of the male.

The measurements given above show a slight average superiority of size in the male, but not sufficient to warrant any generalization in favor of sexual selection, produced by the bloodless combats of these insects; which seem, so far as the records go, to be actuated rather by chivalric sentiment, than by animal passion.

Tribe II. BRENTHINI.

Two species of *Brenthus* collected by Mr. Xántus, at Cape San Lucas, Lower California, which are closely allied to Mexican species, have been fully described by Dr. Horn.* I observe in the males also great variation in the form of the head in different individuals, although the beak, though shorter, is as slender in the ♂ as in the ♀, and the mandibles are equally small, but different in form; the distance from the eyes to the insertion of the antennæ is proportionally longer in the larger males.

The head is deeply excavated beneath, just in front of the neck, in *B. peninsularis*, while it is only slightly so in *B. lucanus*. In *B. mexicanus* there is a short but deep groove in the same position. The front femora alone are toothed in *B. mexicanus* and *lucanus*, while they are all toothed in *peninsularis*.

Subfamily II. CYLADIDÆ.

This sub-family represents the tribe *Cylades*, of Lacordaire, placed by him between *Eurhynchus* and *Apion*, and consists of but two genera, one of which, *Cylas*, occurs in Asia and Africa, while the other, *Myrmecacelus*, is found in Australia. I have sufficiently exposed the characters of this subfamily in the description of the family, and the singular form of the antennæ, as well as the very peculiar appearance of the insect, will enable it to be easily recognized.

The relations of these insects with *Brenthidæ* were well recognized by Fabricius, Latreille and Olivier, and I know not for what reason they have been lost sight of by more recent observers.

CYLAS Latr.

1. **C. formicarius** Olivier, Ent. 84, bis, p. 446; Tab. 2, f. 19; *Brentus form.* Fabr. Syst. El. ii, 549; Ent. Syst. Suppl. 174; *Attelabus form.* Fabr. Ent. Syst. Suppl. 163; *C. turcipennis* Boh., Sch. Curc. i, 369. *Otidocephalus elegantulus* Summers, New Orleans Home Journal, Jan. and Dec. 1875.

Cochin China, India, Madagascar, Cuba and Louisiana. Depredates on the roots of sweet-potato (*Convolvulus batata*).

Body very elongate, smooth and shining, ferruginous, with the elytra bluish black. Head and beak dusky, the latter twice as long as the head, stout, cylindrical, nearly straight, finely punctured towards the base; antennæ inserted near the middle; eyes smooth, rounded, reticulations very distinct beneath the epidermis. Prothorax twice as long as wide, not constricted in front, but very deeply strangulated at the posterior third. Elytra elongate-oval, a little wider than the prothorax, very convex, humeri very oblique; surface feebly and sparsely punctulate. Under surface of trunk and abdomen dusky. Length 5.8 mm.; 2.3 inch.

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*Trans. Am. Ent. Soc. iv, 128.

♂. Last joint of antennæ longer than the others united.

♀. Last joint of antennæ shorter than the others united.

The species of this genus are declared by Lacordaire to be apterous, and so one would naturally suppose from the form of the body. On dissection, however, the wings are found to be very well developed, and the elytra not connate.

Family VIII. CALANDRIDÆ.

Mouth cavity variable according to subfamily, as follows:

1. Gular peduncle very long, concealing the mentum and ligula, buccal fissures narrow and long; mandibles compressed, with three apical teeth in *Calandridæ* (*genuini*).

2. Floor of the mouth so prolonged that all of the organs are concealed, except the mandibles, which are convex on the inner face, with three apical teeth, and usually diverge externally in *Rhinidæ*.

3. Gular peduncle rather broad, mentum trapezoidal, transverse; maxillary palpi rather large; mandibles flattened, curved, with the apex acute, and one prominent tooth on the inner edge, in *Cossonidæ*.

Antennæ geniculate, inserted near the base of the beak (*Calandridæ*), or about the middle (*Rhinidæ* and *Cossonidæ*); scape long, funicle varying from four to seven joints; club variable, with the basal part, and sometimes nearly the whole surface shining, not sensitive; oval and annulated as usual in *Cossonidæ*.

Head porrected, beak at most capable of being deflexed vertically, never narrowed behind the eyes; beak sometimes long, sometimes short; eyes sometimes small, sometimes very large and transverse, contiguous beneath (*Rhinidæ*); antennal grooves very short, and not receiving the scape in *Calandridæ*, suddenly deflexed under the eyes, and receiving the scape in *Cossonidæ*.

Prothorax truncate in front, not emarginate beneath, prosternum long in front of the coxæ, which are separated; prosternal sutures effaced; the transverse suture between the coxæ is wanting in *Calandridæ* and *Cossonidæ*, but distinct in *Rhinidæ*.

Mesosternum triangular, truncate behind, side pieces varying according to genus and tribe; middle coxæ separated, cavities rounded.

Metasternum usually long, episterna varying in breadth, broader in front, epimera large in some *Calandridæ*, small in other genera and subfamilies; hind coxæ transverse, oval, not attaining the side of the abdomen.

Elytra without epipleuræ, exposing the pygidium in *Calandridæ*, covering it more or less completely in the other subfamilies; on the inner surface the elevated fold commences near the base, continues parallel and close to the margin as far as the posterior curvature, where it diverges and becomes obsolete. The space between the ridge and the margin has a pearly lustre, and may possibly serve as a stridulating organ; in the *Cossonidæ* this ridge diverges much less and becomes obsolete sooner.

Abdomen with five ventral segments, of which the first and second are longer, with the suture nearly obliterated at the middle in *Calandridæ*, but deep and entire in *Rhinidæ;* in *Cossonidæ* they are very long, and the suture is effaced at the middle; the third and fourth segments are short, and the sutures straight and deeply impressed; the fifth is about as long as the third and fourth united, and is rounded behind. The dorsal segments are membranous, except the last, or pygidium, which is large, nearly perpendicular in *Calandridæ*, obliquely deflexed in the other subfamilies; the anal segment of the ♂ is quadrate and retractile in *Calandridæ* and *Rhinidæ*, broader and less retractile in *Cossonidæ*, but not continuous with the pygidium as in *Curculionidæ* and *Brenthidæ;* the lateral edge of the metathorax and of the ventral segments is sharp and fits into the lateral groove of the inner surface of the elytra; in the *Cossonidæ* this edge continues on and around the last ventral, thereby showing a tendency towards the modification finally perfected in the *Scolytidæ*, and of which we have already seen traces in the *Brenthidæ*.

Legs moderate, varying though not greatly, according to genus; thighs usually stoutly clavate, not toothed; tibiæ rather short, strongly unguiculate at the outer angle. Tarsi frequently narrow and not brush-like beneath; third joint sometimes bilobed, (*Rhinidæ*) sometimes broad patellate, and not emarginate, (certain *Sphenophori*); claws divergent, simple.

I have embraced in this family several very distinct forms which agree with *Curculionidæ* in general characters, but differ in having the genital segment of the ♂ not articulated directly at the end of the last dorsal, but either retractile or concealed under it. While the mouth organs of the *Cossonidæ* are similar to those of ordinary *Curculionidæ*, and submit to modifications similar to those of *Hylobiini* for instance, in the other subfamilies there are specializations which do not otherwise occur among Rhynchophora.

With regard to the affinities of the members of this family, it may be said, in general terms, that the *Calandridæ* show an alliance with the *Barini;* the *Rhinidæ* continue the specialization still farther, and have not a direct resemblance to any other tribe. The *Cossonidæ* seem to be a connecting line from *Hylobiini* to *Scolytidæ*, to which they approach very closely in *Rhyncolus*.

Three subfamilies occur in our fauna, the characters of which have been sufficiently indicated above: the following table will enable them to be readily distinguished.

Buccal cavity elongate, peduncle of mentum elongate, narrow: pygidium exposed.................. CALANDRIDÆ.
Buccal cavity entirely at the apex of the beak; pygidium covered.............................. RHINIDÆ.
Buccal cavity normal, peduncle of mentum short, oral organs exposed; pygidium covered...... ..... COSSONIDÆ.

Subfamily I. CALANDRIDÆ.

An excellent synopsis of the species of this subfamily, as represented in our fauna is given by Dr. Horn in the Proceedings of this Society for 1873, commencing on page 407. I have but a few new species of *Sphenophorus* to add, which seem scarcely worth describing at the present time. I shall therefore confine myself to giving at greater length my views on the subdivision of the subfamily into tribes and genera, which do not differ essentially from those developed by Lacordaire, and followed by Horn.

Side pieces of metathorax very wide, epimera large.................................. **RHYNCHOPHORINI.**
Side pieces of metathorax moderate, or narrow:
  Mesosthoracic epimera broadly truncate externally; club of antennæ wedge-shaped. **SPHENOPHORINI.**
  Mesothoracic epimera acute externally; club of antennæ oval................. ..... **CALANDRINI**

Tribe I. RHYNCHOPHORINI.

The species of this tribe are of large size, and with the exception of *Rhynchophorus*, have the mandibles turned outwards as in the *Rhinidæ;* in the genus just mentioned, the mandibles are of the usual pincer-form with three small apical teeth. The funicle of the antennæ consists of six perfoliate joints, strongly constricted at the outer end; the club is transverse, trapezoidal, corneous, with the terminal face flat, spongy and sensitive.

One species, *R. cruentatus*, represents this species in the Southern States. It is parasitic on *Chamærops palmetto.* In consequence of the extension of the mesothoracic epimera upwards, the humeral portion of the elytra is truncated, as in *Barini.* The third joint of the tarsi is but little wider than the second, not emarginate, fringed at the apical margin beneath. In the ♂ the tibiæ, and to a less extent the thighs are densely fringed with long yellow hair on the inner side: in the ♀ the hairs are much less dense. The genital segment is sometimes protruded; it is nearly smooth, and finely channeled above in both sexes, but is longer and narrower in the ♀, in which sex also the pygidium is more flattened, and more obliquely narrowed at the tip.

Tribe II. SPHENOPHORINI.

The species of this tribe are rarely large, but never very small. The mandibles are always pincer-shaped, with three apical teeth. The mesothoracic epimera are large, and truncate at the outer side, so that the outline of the elytra near the base is straight, and not oblique as in the preceding tribe; the metathoracic episterna are rather narrow, and the epimera small, though quite obvious.

Three genera have been observed in our fauna.

Spongy portion of antennal club flat............ SCYPHOPHORUS.
  " " " " convex............. 2.

2. Anterior coxæ widely distant...............	METAMASIUS.
" " narrowly separated...........	3.
3. Third joint of tarsi patellate, spongy surface not divided.............................	CACTOPHAGUS.
Third joint of tarsi patellate, spongy, narrowly divided..................................	RHODOBÆNUS.
Third joint of tarsi pilose at the sides or glabrous.	SPHENOPHORUS.

SCYPHOPHORUS Sch.

The species of this genus are parasitic on *Yucca*, and seem to me rather opinionative than actual.

1. **S. acupunctatus** is found in California, Colorado, and Mexico; it is somewhat shining, with the prothorax moderately constricted at tip, and the lateral punctures elevated. *S. interstitialis* of Cuba, has the same punctuation of prothorax, but a little stronger, and the apical constriction is less marked; the lustre is more dull. *S. robustior* Horn, from Texas, has the form of prothorax of *acupunctatus*, but the punctures are coarser, and the lateral ones are less elevated; the lustre is also dull as in *S. interstitialis*.

2. **S. yuccæ** Horn, from California, is quite distinct by the more depressed upper surface, and the single rows of punctures on the interspaces of the elytra.

METAMASIUS Horn.

M. sericeus Horn, Pr. Am. Phil. Soc. 1873, 410. *Calandra sericea* Latr. Humb. and Bonpl. Voyage, v, 41, Tab. 22, f. 4; Oliv. 83, p. 84; Tab. 28, f. 109; *Sphenophorus ser.* Gyll., Sch. Curc. iv, 896.

This species occurs in California and Arizona; also in Cuba, Mexico, and S. America, as far as Peru.

SPHENOPHORUS Sch.

The species *S. 13-punctatus* and *validus* contained in Horn's Group ii, should each constitute a distinct genus; the other species, in which the third joint of the tarsi is not spongy beneath, but merely pilose, sometimes broad, sometimes narrow, might be regarded as constituting but one genus.

CACTOPHAGUS n. g.

I would separate as a distinct genus a species of large size, and dull velvety black color, which differs from *Sphenophorus*, by the absence of inequalities or coarse sculpture, and by the third joint of the tarsi being somewhat transverse, and uniformly densely spongy beneath; the first and second joints are narrow, and glabrous beneath. The tibiæ are slender, not sinuate, and the outer part of the tip is regularly rounded, not at all truncate, or angulated. The gular peduncle, though deeply channeled, is regularly rounded at the end, not abruptly subtruncate as in *Sphenophorus*; whereby the beak remains cylindrical, and is not at all compressed at tip.

1. **C. validus.** *Sphenophorus val.* Lec., Pr. Ac. Nat. Sc. Phila. 1858, 80; Horn, Pr. Am. Phil. Soc. 1873, 415; *S. procerus* Lec., Pr. Ac. 1858, 80.

California, from San Diego to Cape San Lucas; Arizona, Mexico. The synonym belongs to a form in which the apical constriction of the prothorax is less obvious; this variation serves to confirm the opinion above expressed regarding the species of *Scyphophorus.* The specimens were found exclusively under decaying Opuntia leaves.

RHODOBÆNUS n. g.

I would also separate as distinct the usually red species with black spots, which agree with *Cactophagus* in the form of the gular peduncle, but differ in the tibiæ subtruncate at the tip, with the outer angle obtuse, but distinct, the third joint of the tarsi is equally broad and spongy beneath, but the brush is divided by a narrow line; the first joint is hairy at the tips, while the second is densely hairy, with a narrow median line. The elevations above the insertion of the antennæ are much stronger, and the scape of the latter comparatively longer. The mesosternum is also narrower than the other genera. The species are found on flowers, mostly rose-bushes; but two are known to me in our fauna; the first is red, with black spots; the second brown, irrorate with grayish round spots, which surround the punctures.

1. **S. tredecimpunctatus.** *Curculio tred.* Illiger, Schneider's Mag. v, 613; for synonymy see Horn, l. c. 414.

Atlantic district, to Colorado, also in Mexico, and South America.

2. **S. pustulosus** Gyll., Sch. Curc. iv, 923; Horn, l. c. 415.

Arizona; also in Mexico.

Tribe III. CALANDRINI.

This tribe consists of small species, in which the mandibles are pincer-shaped, and not everted; the club of the antennæ not compressed, and the mesothoracic epimera transverse, acute at the outer end, and intervening between the humeral part of the elytra and the base of the prothorax. The anterior part of the last dorsal segment of the abdomen is channeled for the reception of the sutural edge of the elytra, almost as in *Anthribidæ.* This is a very peculiar character, and I find no trace of it in the other genera in our fauna.

CALANDRA Clairv.

This genus differs from the others contained in the tribe, but not represented in our fauna, by the antennal club being oval, the corneous part separated from the sensitive part by a transverse line; the sensitive part being convex, and somewhat pointed. The body is narrow, and elongate, quite different to that observed in the genera of the two preceding tribes, rather resembling *Rhina* in miniature.

Three species occur in our fauna; they have been distributed in the cereal grains upon which they depredate, so that their original habitat cannot be known with certainty. Dr. Horn mentions that from time to time other species have been introduced by ships from tropical ports, but fortunately they have not yet become naturalized.

1. **C. oryzæ** Fabr., Syst. El. ii, 438, &c.; Horn, l. c. 430; *Curculio oryzæ* Linn. Amœn. Acad. vi, 395, &c.; *Rhynchophorus oryzæ* Herbst, Käfer, vi, 18, Tab. 60, f. 9; *Sitophilus oryzæ* Gyll., Sch. Curc. iv, 981, (cum synon. and bibliographia).

Found in every part of the globe; universally distributed by commerce, and said to have been originally derived from Asia; it affects rice, wheat, and Indian corn (maize). The surface is dull, and the prothorax densely punctured; the elytra are usually ornamented with four red spots, but are sometimes red, with the suture, side margin and tip darker.

2. **C. remotepunctata** Horn, Pr. Am. Phil. Soc. 1873, 430; *Sitophilus rem.* Gyll., Sch. Curc. iv, 979.

Atlantic district, extending into Arizona. The surface is somewhat shining, and the prothorax is more coarsely and less densely punctured.

3. **C. granaria** Fabr., Syst. El. ii, 437; Oliv., 83, p. 95; Tab. 16, f. 196, &c.; *Curculio granarius* Linn., Fn. Suec. 587; Syst. Nat. 12th, ii, 608, &c.; *Sitophilus granarius* Gyll., Sch. Curc. iv, 977, cum synon. plur.

Missouri, depredating on wheat; C. V. Riley. Very similar to the preceding, but the punctures of the prothorax are smaller, and the striæ of the elytra much finer and less coarsely punctured.

Subfamily II. RHINIDÆ.

This subfamily corresponds nearly if not exactly with Lacordaire's tribe *Sipalides*, and the essential differences between it and the *Calandridæ* are in the position of the buccal opening which is entirely at the end of the beak, not extending upon the under surface; the pygidium is not large and perpendicularly declivous as in the last subfamily, but covered by the elytra, which are conjointly rounded at tip; another character also separates it from *Calandridæ* (though not from Lacordaire's tribes *Stromboscerides*, and *Oxyrhynchides*, which are not represented in our fauna, and are unknown to me in nature); the eyes are strongly granulated, very large, and confluent on the under surface of the head.

In nearly all the genera mentioned by Lacordaire, the mandibles are convex on the inner face, and the apical teeth are everted, though this is probably a group or generic character as in certain tribes of *Calandridæ*. The club of the antennæ varies in form according to genus, and is not annulated. The tarsi also vary, the third joint being narrow in some genera, wide and bilobed in others.

But one representative occurs in our fauna, which indicates a new genus; allied to *Rhina* and *Harpacterus*.

YUCCABORUS n. g.

The body is elongate, glabrous, subcylindrical, resembling in appearance a gigantic *Cossonide*; the beak is straight, as long as the prothorax, usually flexed perpendicularly downwards; sculptured beneath with three longitudinal grooves; antennal grooves very short; eyes transverse, coarsely granulated, contiguous beneath, but widely distant above, and not extending to the upper surface of the cranium. Antennæ with scape reaching the eyes; funicle 6-jointed, longer than the scape; club elongate-oval, as long as the four preceding joints; spongy part as large as the corneous part, and separated from it by angulated lines, so as to extend farther upon the sides than upon the faces of the club, which is slightly compressed.

Prothorax longer than wide, rounded on the sides, a little narrower at tip than at base, and constricted; truncate before and behind. Scutellum small, rounded. Elytra with shallow punctured striæ, interspaces wide, sparsely punctured; conjointly rounded at tip, pygidium slightly prominent. Legs slender, thighs not clavate, tibiæ subsinuate on the inner side, and feebly serrate, especially the front pair; outer angle obtuse, indistinct, inner angle strongly unguiculate; tarsi slender; third joint a little wider, bilobed, not spongy beneath, but smooth and glabrous like the others.

This genus differs from the two above named by the form of the antennal club, by the eyes being widely distant above, and by the third tarsal joint much smaller, not spongy beneath.

1. **Y. frontalis.** *Rhina frontalis* Lec., Trans. Am. Ent. Soc. 1874, 70. Mojave Desert, Cal.; under bark of Yucca; G. R. Crotch. Length 8–11 mm.; .32–.45 inch. I expressed my opinion when describing this species, that it might indicate a distinct genus; but my knowledge of *Rhynchophora* at that time was not sufficient to enable me to properly define it.

Subfamily III. COSSONIDÆ.

The abnormal form of mouth seen in the two preceding subfamilies is here replaced by the ordinary buccal cavity and mouth organs seen in *Curculionidæ*. The gular peduncle is rather broad, not very long, the mentum and ligula with its palpi are distinct, and moderately large, and the maxillæ and palpi are well developed. The beak varies greatly, being sometimes rather long, and moderately slender, sometimes so short and stout as to become indistinct. The antennæ are inserted at a variable distance, being sometimes basal, sometimes nearly apical; the scape generally extends beyond the eyes; the funicle has from four to seven joints; the club is small, oval, partly corneous in some genera, and but feebly annulated. The front coxæ are sometimes widely separated, sometimes almost contiguous. The thighs are unarmed, and the tibiæ are armed in our genera with a long curved spine at the inner apical angle; the tarsi are variable, the third joint is usually not broader; in one genus, *Dryophthorus*, by an exception otherwise unknown in the family, and repeated again only in *Platypus* and some other genera among the *Scolytidæ*, the tarsi are distinctly 5-jointed.

Neglecting the number of joints in the funicle of the antennæ as being rather of generic than tribal value, I would divide the few genera represented in our fauna as follows:

Beak long, not dilated at tip; body uneven, covered with a crust...........................	DRYOPHTHORINI.
Beak long, or moderate, usually dilated at the end, with rapidly descending antennal grooves, front coxæ distant, body sometimes depressed..	COSSONINI.
Beak usually short, always continuous with the front, and equally stout; front coxæ approximate; body cylindrical......................	RHYNCOLINI.

Tribe I. **DRYOPHTHORINI.**

I have associated with *Dryophthorus* two other genera which have but little in common with it or with each other, except the following characters, by which they differ from other *Cossonidæ*, and approach other groups of *Rhynchophora*. The beak is longer than the head, not very stout, cylindrical, not dilated at tip, and the buccal cavity is smaller; the gular peduncle and mentum are smaller and narrower than in the other tribes. The tibiæ are slender, not at all dilated and the terminal hook is long. The body is coarsely sculptured, and covered with a dirt-colored crust.

Two groups are indicated by the three genera before me.

Metasternum long; funicle 4-jointed....................	**Dryophthori.**
Metasternum long or short; funicle 5–7 jointed..........	**Dryotribi.**

Group I. **Dryophthori.**

A single small species, represents this group in our fauna. It resembles in form *Calandra*, rather than any genus of *Cossonidæ* known to me. The antennal club is rounded, oval, corneous, except the tip, which is spongy and not annulated; the joints of the funicle are only four, while those of the tarsi are distinctly five, though in the South European *Chærorhinus*, according to description, this anomaly disappears, and the tarsi are 4-jointed. The metasternum is long and the side pieces are narrow; the first, second and fifth ventral segments are very large; third and fourth excessively short, shorter in fact than in any other genus I have examined. The antennæ are inserted very near the eyes, which are coarsely granulated and transverse.

DRYOPHTHORUS Sch.

1. **D. corticalis** Say, Curc. 24; ed. Lec. i, 292; Boh., Sch. Curc. iv, 1089; Horn, Pr. Am. Phil. Soc. 1873, 431.

Atlantic district generally; found under bark. Boheman mentions the occurrence in California of *D. bituberculatus*, which is widely distributed over the islands of the South Pacific; Sandwich Islands and New Zealand. Its extension to California is doubtful.

Group **Dryotribi.**

Two species of very remarkable genera are here represented; the first bears some resemblance to *Dryophthorus*, and in the arrangement of Wollaston* would be placed in the first group of his *Pentarthrides*. The second genus would probably go near *Lymantes*, which is thus far unknown to us, and may perhaps have some relation to the European *Styphloderes*.

Besides the more slender beak, and the crusty covering, these insects differ from those of the following two tribes by the head being rather peculiarly constricted behind the eyes, which are small, rounded and very coarsely granulated; the result of this form of head is that the eyes are situated on the beak, instead of at the sides of the cranium proper. The scutellum is not visible in either of our genera, and I am inclined to believe that this will be found a character of the group, permitting the association of forms now widely separated.

Antennæ with 5-jointed funicle........................DRYOTRIBUS.
" " 7-jointed " .... GONONOTUS.

DRYOTRIBUS Horn.

1. **D. mimeticus** Horn, Pr. Am. Phil. Soc. 1873, 433.

Key West, Florida, February; Mr. Burgess. The eyes are nearly round, and composed, as observed by Dr. Horn, of about twenty lenses; the constriction is about half way between the eyes and the apex of the prothorax. The scape of the antennæ extends to the hind margin of the eye.

GONONOTUS n. g.

Beak rather slender, as long as the prothorax, moderately curved, very coarsely sculptured, separated from the head by a transverse constriction immediately behind the eyes, which are small, convex, prominent, and composed of about thirty to thirty-five lenses. Antennæ inserted about one third from the end of the beak, scape slender, extending to the eyes, funicle 7-jointed, longer than the scape, rather slender, first joint longer and stouter; club small, oval, rather shining, thinly pubescent, annulated on the outer half; antennal grooves lateral, deep, extending to the lower margin of the eyes. Head small, very short. Prothorax about as long as wide, uneven, coarsely sculptured, sides bisinuate and suddenly constricted far from the tip, thus causing two lateral protuberances, one near the base, and another more prominent in front of the middle. Elytra elongate-oval, a little wider than the prothorax, subcostate, with intervening shallow grooves, costæ with rows of extremely short and indistinct hairs. Prosternum narrow, front coxæ narrowly separated, middle coxæ moderately separated, hind coxæ very widely separated. Mesosternum short, side pieces narrow. First, second and fifth ventral segments long, third and fourth united about equal to the fifth, first suture obliterated in great part. Legs slender, rather long, thighs slightly clavate, terminal hook of tibiæ smaller than usual in this sub-family; tarsi short, rather stout, third joint broader, bilobed and hairy beneath; last joint more thickened at tip than usual, claws small, divergent.

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* Genera of the *Cossonidæ*: Trans. Ent. Soc. London, 1873, p. 434.

1. **G. lutosus**, n. sp.

Dull pitchy black, without lustre, and clothed with a thin crust of dark color. Head and beak very coarsely rugosely punctured. Prothorax coarsely granulate, each granule with a central puncture; disc with two broad shallow grooves, or rather with three fine but not prominent carinæ. Elytra with shallow cribrate grooves, interspaces narrow, carinate, alternately a little more elevated. Beneath very coarsely punctured; antennæ testaceous. Length 2.5 mm.; .10 inch.

Haulover, Florida, March 16th; Messrs. Hubbard and Schwarz. A very singular insect, of which I hope more specimens may be obtained than the single one I have examined.

Tribe II. COSSONINI.

I would associate as a distinct tribe certain other genera, which have not the body covered with a crust, but shining and bare; some of the foreign genera are more or less setose, but ours are glabrous.

The beak is never very short, and is frequently dilated at tip; the antennæ are inserted near the tip, or at the middle; the antennal grooves frequently descend rapidly on the sides of the beak, and sometimes are directed towards the eyes, but the antennæ are not received in repose in a deep transverse gular groove as in the next tribe. The club varies in form, and in our genera the funicle is 7-jointed; whether any of the genera of other countries, with less number of joints in the funicle, belong to the tribe as here constituted, must be determined by subsequent investigations.

The arrangement here proposed differs radically from that offered by Mr. Wollaston, and, if found in accordance with natural affinities, will result in a great reduction of the number of genera.

The genera I recognize in our fauna are as follows:

Body not depressed, beak not dilated at tip..	2.
Body very depressed, beak not dilated at tip,	HOMALOXENUS.
Body depressed, beak dilated at tip; antennæ inserted near the tip, grooves descending rapidly	COSSONUS.
2. Antennæ inserted near the middle of the beak	3.
Antennæ inserted near the tip of the beak; funicle stout, club moderately small...	MACRORHYNCOLUS.
Antennæ inserted near the base of the beak, body very narrow	MACRANCYLUS.
3. Antennal grooves descending obliquely,	4.
" " directed towards the eyes	ALLOMIMUS
4. Body pale, very elongate; funicle slender, club large	STENOMIMUS.
Body black, less elongate: funicle gradually stouter, club large	CAULOPHILUS.
Body black, less elongate, funicle very stout, club small	MESITES.

HOMALOXENUS Wollaston.

H. dentipes Woll., Tr. Ent. Soc. London, 1873, 615.

Florida: a single specimen, collected and kindly given to me by Baron R. Osten Sacken, agrees so perfectly with the description of Mr. Wollaston of his specimen from S. Domingo, that I am not warranted in considering it as distinct. The only difference seems to be that in my specimen the thighs, though very thick, are hardly perceptibly toothed; this character may, however, be sexual. The insect will be easily recognized by the very depressed form, brown color, with dull lustre; very slender beak, as long as the prothorax; slender antennæ; scarcely mucronate tibiæ, and very widely dilated and bilobed third tarsal joint; characters of rare occurrence in the present sub-family, but combined with a general appearance which renders the affinities with this tribe unmistakable.

COSSONUS Clairv. (emend. Wollaston.)

To this genus, as now restricted, belong the eight species comprised in group A, Horn, Pr. Am. Phil. Soc. 437. An excellent table of differences, also the bibliography and full descriptions are there given. The funicle of the antennæ becomes gradually stouter, and the dilatations of the apex of the beak less evident from the first species (*platalea*), to the eighth (*impressifrons*), thus establishing an imperceptible transition to *Borophlœus* Woll. So far as I may judge without comparison of specimens, I do not see why *B. minor* Woll. Trans. Ent. Soc. London, 1873, 627, may not be referred to the species determined by Horn as *C. corticola* Say.

MACRORHYNCOLUS Wollaston.

To this genus I refer the Californian *Rhyncolus protractus* Horn, Pr. Am. Phil. Soc. 1873, 444, which differs from the true *Rhyncoli*, not only as stated by Horn, in the widely separated front coxæ and linear form, but by the longer cylindrical beak, which is quite distinctly separated from the head. The third joint of the tarsi is narrow and feebly bilobed.

MACRANCYLUS n. g.

The number of genera in this tribe has been increased to such an extent as to render them extremely difficult to recognize. I am quite unwilling to add to the names already published, until an attempt has been made to combine them into larger groups. It is for this reason that I regret to propose this genus for an extremely slender but cylindrical (not depressed) species, which has the beak stout, not separated from the front, gradually but slightly tapering externally. The antennal grooves commence about the middle of the beak, and the antennæ are inserted behind the middle; the scape is long, extending to the back part of the eyes, and is rather suddenly bent and thickened from the middle to the tip; the funicle is moderately stout, the first joint larger and thicker; the remaining joints short, closely united, gradually but very slightly broader; club oval, pointed, rather small, distinctly annulated in the outer half. The antennal grooves are deep and directed against the eyes, which are round, moderate in size, and finely granulated. The front coxæ are widely separated; the tibiæ gradually dilated and the front pair are pubescent towards the tip; a distinct spine is seen at the inner apical angle; terminal hook long; tarsi with rather broad joints, third a little wider, feebly bilobed, last joint longer than the others united; claws large, divergent. Scutellum distinct, elytra with punctured striæ, which are deeply impressed near the tip.

1. **M. linearis**, n. sp.

Very elongate, cylindrical, piceous or brown, shining, glabrous; head and beak finely punctured. Prothorax more than one-half longer than wide, more strongly but not densely punctured, without impressions; slightly narrowed in front, sides rounded near the base. Elytra not wider than prothorax, striæ composed of approximate punctures, deeply exarate on the posterior declivity for a short distance. Beneath distinctly but finely punctured; flanks of prothorax feebly concave in front. Antennæ and legs reddish brown. Length 3 mm.; .12 inch.

Haulover; Florida, March: Messrs. Hubbard and Schwarz; abundant on the sea shore; no sexual differences observed. The fifth ventral segment is longer than the third and fourth united; the three together are scarcely longer than the first and second; the first ventral suture is obliterated, even at the sides.

ALLOMIMUS n. g.

I cannot refer *Cossonus dubius* Horn, l. c. 442, to any of the genera described by Wollaston. It is nearly allied to *Macrancyclus*, but is of less elongate form, and very much more coarsely sculptured; the elytra are in fact rather sulcate than striate, though the deep striæ are coarsely punctured, and the interspaces narrow with single rows of small punctures. The beak is stout, cylindrical, a little narrower than the head, and nearly as long as the prothorax; the antennal grooves commence in front of the middle, and run directly towards the eyes, which are small, rounded, moderately convex and not very finely granulated; the antennæ are not very stout, the scape straight, strongly clavate, extending to the front margin of the eyes; funicle 7-jointed, first joint a little larger and stouter, remaining joints short, closely united, gradually but slightly broader, club large, oval-pointed, pubescent, annulated. Scutellum distinct. Front coxæ widely separated; thighs rather stout, tibiæ dilated, with a small spine at the inner angle; terminal hook long; tarsi with the third joint a little wider, and feebly bilobed; last joint long, with divergent claws.

1. **A. dubius** Horn, l. c. 442 (*Cossonus*).

I have seen but one specimen from Illinois; it is easily known by the characters given above, and by the very coarse sculpture. Length 1.75 mm.; .07 inch.

STENOMIMUS Woll.

I think that *Phlœophagus pallidus* Boh., Sch. Curc. viii, 2d, 279; *Cossonus pall.* Horn. Proc. Am. Phil. Soc. 1873, 441, may properly be referred to this genus, the characters of which are set forth by Wollaston, Trans. Ent. Soc. London, 1873, 480. It is easily recognized by the pale color, very small size and narrow form. Southern States.

CAULOPHILUS Woll.

1. **C. latinasus.** *Rhyncolus lat.* Say, Curc. 30, ed. Lec. i, 299; Boh., Sch. Curc. iv, 1068; *Cossonus pinguis* Horn, Pr. Am. Phil. Soc. 1873, 442.

Southern States: the synonymy is on the authority of Dr. Horn, from specimens in the collection of Mr. Chevrolat. The reference to the genus is made after a careful study of the characters given by Wollaston, Ins. Maderensia, 315, pl. vi, f. 4; Trans. Ent. Soc. London, series 2d, v, 368, supplemented by the descriptions in the same work, 1873, 499 and 586. Except that the punctuation of the prothorax is coarser in the figure than in the three specimens in my collection, I should not venture to declare them as a different species from *C. sculpturatus*.

MESITES Sch.

1. **M. subcylindricus** (Horn), Pr. Am. Phil. Soc. 1873, 441, (*Cossonus*).

One ♂ found by me on the sea shore near Cape Henlopen, Delaware. This is the largest *Cossonide* known in our fauna, being 6.5 mm.; .26 inch long.

Tribe III. RHYNCOLINI.

The genera of this tribe while differing from those of the *Cossonini* only by having the prosternum very narrow between the coxæ, and by having a deep transverse gular groove beneath in front of the eyes, exhibit other characters which show a strong approximation to the *Scolytidæ;* thus the number of joints in the funicle of the antennæ varies so as to be barely of generic value; the beak becomes very much shortened, and the head comparatively larger, as in *Stenoscelis;* the form of the club varies, becoming wedge shaped, truncate and spongy at tip in *Wollastonia*, thus recalling the form seen in *Rhynchophorus*, &c.; quite rounded or perhaps a little transverse in *Stenoscelis*. The form is also that of certain *Scolytidæ*. *Rhyncolus* resembles closely one section of *Hylastes*, while *Stenoscelis* has altogether the appearance of *Hylurgops* (*H. rugipennis*, &c.).

As in the Rhynchophora, from the nearly perfect representation of past and present forms, there are almost always intermediate genera to be found, I would say that *Phlœophagus* seems to be one of such intermediates, and would be in place in the preceding tribe, if I did not regard the approximate front coxæ as having greater systematic value than the longer beak and the weaker gular groove.

The antennal grooves always commence near the tip of the beak and descend obliquely below the eyes.

Our genera may be separated as follows:

Beak thick, neither dilated at tip, nor cylindrical, slightly narrowed from the base to the tip, convex	2.
Beak very short, parallel on the sides.......	4.
" longer, gula only feebly concave transversely..............................	PHLŒOPHAGUS.
2. Club rounded, pubescent, feebly annulated	3.
Club corneous, truncate at tip, which is spongy; funicle 5-jointed................	WOLLASTONIA.
3. Funicle 5-jointed..........................	AMAURORHINUS.
" 6-jointed..........................	HEXARTHRUM.
" 7-jointed	ELASSOPTES.
4. Tarsi dilated, antennal grooves long........	RHYNCOLUS.
" narrow, antennal grooves very short..	STENOSCELIS.

The genera and species are fully described by Dr. Horn in the memoir above cited, and need no farther mention at present.

Family IX. SCOLYTIDÆ.

Mentum moderate in size, varying in form in some genera according to sex; without gular peduncle (except in *Hylastes*, where it is very small); ligula and palpi small, the former sometimes retracted, sometimes prominent.

Maxillæ exposed, palpi stout and short.

Mandibles stout, curved, more or less toothed on the inner side.

Antennæ inserted on the sides of the head, between the eyes and mandibles; composed mostly of scape and club, funicle usually very short, from 1- to 7-jointed; club large, solid, annulated, or rarely (*Phlœotribus*) lamellated; surface of the club more or less sensitive according to genus.

Head prominent in some tribes, deflexed and protected by the prothorax in others; eyes usually large and transverse; beak never long, frequently so short as to be not apparent. Labrum feebly developed, sometimes visible.

Prothorax truncate in front, exposing the head, (*Platypodidæ*, *Scolytini* and *Hylurgini*), or prominent, convex and rounded (most *Tomicini*); lateral edge not distinct,[*] and prosternal sutures obliterated; flanks excavated for the partial reception of the front legs in *Platypodidæ*; coxal cavities usually confluent; separated in a few genera.

Mesosternum triangular, pointed behind, or slightly truncate, episterna (*Platypodidæ*) excessively large, ascending between the base of the prothorax and elytra with the epimera small, posterior and transverse, or with the suture very indistinct; coxæ rounded, not widely separated.

Metasternum long, sometimes, (*Platypodidæ*) very long; side pieces parallel, or nearly so, not dilated in front.

Legs moderate in length, rather stout, front coxæ almost always contiguous; middle and hind coxæ more or less separated; tibiæ compressed, toothed or with transverse ridges on the outer side; armed with a terminal hook at the inner apical angle. Tarsi in some genera filiform and 5-jointed; in others 4-jointed, with the third joint either narrow, or dilated and bilobed; last joint long, with large, simple, divergent claws.

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[*] Except in *Scolytus*. *Eutomus*, as has been elsewhere observed is not a Rhynchophorous insect but allied to *Rhipidandrus*.

The insects of this family are mostly of cylindrical form, and small size. They are the most formidable enemies of trees, sometimes devastating the forests, especially of conifers, by appearing in incredible numbers: the burrows are chiefly between the wood and the bark, though some genera penetrate more deeply (*Xyloteres, &c*). The patterns made by them are complex and vary according to genus and species; those of several European species are figured in the excellent work of Ratzeburg,* and since descriptions of our species are now accessible, so that their identification is easy, I trust that those interested in the preservation of our forest trees may direct their attention to this important subject. Specimens of the ravages of these insects should be carefully collected, with individuals taken from the burrows, and these should be deposited in some museum where they will be carefully preserved for future study.

Since the publication of my revision of this family,† a few additional species have been found, and a renewed study of the genera has rendered necessary some modification of the classification there proposed.

The great differences exhibited by *Platypus*, and its allies, indicate the propriety of separating them as a distinct sub-family, a course already adopted by Lacordaire.

First joint of tarsi as long as the others united.... **PLATYPODIDÆ.**
" " " much shorter than the others united.................................... **SCOLYTIDÆ.**

Sub-family I. PLATYPODIDÆ.

Head large, not covered by the prothorax, front wide, oblique or vertical; labrum small, but distinct. Beak wanting; eyes rounded, not convex, finely granulated in our species. Antennæ with large scape (elongated and curved in some foreign genera), and large compressed solid club, which is pubescent except for a small space at the base; funicle composed of four small joints. Prothorax elongate, truncate before and bisinuate behind; subsinuate on the sides; flanks broadly excavated for reception of front legs. Prosternum moderately long in front in the coxæ, which are very large, conical, exserted and contiguous in our species; space behind the coxæ very short. Pronotum considerably longer than the under surface; middle of base notched for reception of the carina of the mesonotum. Mesosternum triangular, middle coxæ narrowly separated; episterna very large, quadrate, occupying the space formed by the prolongation of the pronotum; epi-

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*Die Forst-Insecten, Vol. i.

†Synopsis of the *Scolytidæ* of America, north of Mexico, by C. Zimmermann, M.D., with notes and additions by J. L. LeConte, M.D. Trans. Am. Ent. Soc. 1868, 141.

mera small, transverse, posterior and indistinct. Metasternum very long, episterna parallel, rather wide; hind coxæ slightly separated. Ventral segments 5; first and second very short, together scarcely equal to the third, which is equal to the fourth; fifth a little longer, rounded behind; last dorsal segment horizontal, partially or completely covered by the elytra, according as the segments are deflexed or retrac'ed.

Elytra margined and perpendicularly declivous at base, striate, variously prolonged into processes at tip, according to species and sex. Mesonotum strongly carinate.

Legs short, thighs stout, compressed; tibiæ shorter than the thighs, stout; unguiculate, marked on the outer side with transverse ridges. Tarsi long, slender, first joint as long or longer than the three following united; fourth joint one-half as long as the third; fifth as long as the joints 2–4 united; claws long, simple, divergent.

This sub-family is represented in our fauna by a few species of *Platypus* found chiefly in the Southern States. The species are cylindrical, and suggest a resemblance to certain *Colydiidæ*, from which, however, they widely depart in structural characters.

PLATYPUS Herbst.

In this genus the maxillary palpi are large, flat, membranous, 4-jointed, with the joints received one into the other, and the pygidium is almost or entirely covered by the elytra. The sexual differences in the processes of the elytra are such as to make it difficult to construct a table of the species:

1. Ventral segments with elevations..........	2.
" " without elevations........	3.
2. Elevations at the posterior margin of the third segment......................	1. **flavicornis** ♀.
Elevations very acute, at the posterior margin of the fourth segment............	2. **quadridentatus** ♀.
3. Prothorax nearly twice as long as wide	3. **compositus** ♂ ♀.
" one-half longer than wide........	4. **rugulosus** ♂ ♀.
" with two large discoidal punctures	1. **flavicornis** ♂.

1. **P. flavicornis** Chap., Mon. Plat. 154, f. 70, ♂ ♀: *Bostrichus flav.* Fabr., Mant. 212; Sp. Ins. i, 67; Ent. Syst. ii, 364; Syst. El. ii, 384; Herbst, Käfer, v, 118; *Scolytus flav.* Oliv., Ent. 78, 4, pl. 1, f. 1.

♂. Elytra with the third interspace somewhat elevated and roughened at base; the posterior process of the elytra shorter and less acute; the declivity of the elytra concave near the tip, and the tip itself truncate and feebly emarginate. Ventral segments finely rugose, regularly convex; prothorax with a large puncture each side of the anterior extremity of the short dorsal impressed line; *P. disciporus* Chap., l. c. 219, f. 123, is a variety in which the elytral process is shorter and less prominent.

♀. Elytra with the base of the third interspace less elevated; the posterior process longer, more acute, serrate on the outer side. Ventral surface punctured and finely rugose, opaque; posterior margin of third and fourth segments thickened, the former with two distant conical elevations.

South Carolina, Florida and Texas, extending into Mexico. Length 5.2–5.7 mm.; .21–.23 inch.

2. **P. quadridentatus.** *Scolytus quadr.* Oliv., 78.5; pl. 1, f. 3: Lec. apud Chapuis, Mon. Plat. 338, (err. cler.): *P. Blanchardi* Chap., Mon. 185, f. 96.

♀. Elytra deeply striate, with a posterior process at the end of the third interspace, and a large compressed obtusely truncate one at the junction of the fifth and eighth interspaces: ventral surface opaque, densely punctured; fourth segment with two acute spines near the hind margin.

♂. Unknown.

Florida: length 4 mm.; .16 inch; occurs also in Texas, according to Mr. Chapuis, if I am correct in considering his species as the same.

3. **P. compositus** Say, Journ. Ac. Nat. Sc. Phila., iii, 324 (♀); ed. Lec. ii, 182; Er., Wiegm. Arch. 1836, ii, 65; Chapuis, Mon. Plat. 163, f. 75, ♂. ♀; *P. parallelus* Chap., ibid. 164, f. 76, ♂, ♀; ? *Bostrichus par.* Fabr., Syst. El. ii, 384, (description of no value); ?. *P. tremiferus* Chap., Mon. Plat. 174, f. 85, ♂, ♀; ? *P. perfossus* Chap., ibid. 176, f. 86, ♂, ♀; ? *P. rugosus* Chap., ibid. 176, f. 87, ♂, ♀.

♂. Apical part of front smooth; prothorax scarcely punctulate; elytra transversely impressed near the tip, without posterior process. Ventral segments shining, sparsely punctulate.

♀. Front uniformly rugose; prothorax distinctly punctulate; elytra with the second interspace compressed and forming an acute cusp near the tip; fifth and ninth interspace prolonged into a large process, which is concave above, and tridentate at tip; the outer tooth much longer, narrow and truncate or emarginate at tip according to age of specimen, or direction of view. Ventral segments opaque, densely punctured; fifth flat, not carinate, nor tuberculate.

Illinois to Texas, Louisiana, Florida, South Carolina. Neither the figures nor descriptions of Dr. Chapuis indicate anything more, in my opinion, than slight individual variations of form and sculpture, such as I would be unwilling to admit as having specific value. Nevertheless, as I have not seen the typical specimens, I cannot be certain of the correctness of this view. The original description of Fabricius refers to a male of this or some allied species, but is quite irrecognizable, and should not take precedence over the well-defined characters published by Say. Length 4 mm.; .16 inch.

4. **P. rugulosus** Chap., Mon. Plat. 192, f. 103, ♂, ♀.

♂. Front entirely opaque, finely rugose; prothorax feebly punctulate; elytra finely not deeply striate, transversely impressed at tip, without subapical process. Ventral segments shining, sparsely and finely punctured.

♀. Front entirely opaque, densely rugosely punctured (areolate in fact); prothorax unequally punctulate and punctured, less finely at the sides; elytra deeply striatopunctate, interspaces more convex behind; second elevated, forming a small cusp at the posterior declivity; posterior process as in the preceding, but shorter and stouter, with the three teeth of nearly equal length, the outer one broad, and not very distinctly separated from the upper one; the inferior one a little shorter and acute. Ventral segments opaque, densely punctured; fifth sometimes finely carinate, sometimes feebly tuberculate.

Cape San Lucas, Lower California; Mr. Xantus; also found in Mexico. This species is allied to the preceding, but is less elongate, the prothorax being but little longer than wide, and the deep impressed dorsal line is longer, and not terminated in front by a short, transverse impression. The sexual characters, as will be seen, are quite different.

5. **P. punctulatus** Chap., Mon. Plat. 199, f. 110, ♀.

Texas, allied to the preceding, and apparently differs only by the last ventral segment having a strongly marked tubercle. Unknown to me.

Sub-family II. SCOLYTIDÆ (*genuini*).

The characters by which this sub-family differs from the *Platypodidæ* have been already sufficiently pointed out; in other respects the species differ greatly according to genus and tribe, and the chief peculiarities will be pointed out under the appropriate heads.

The genera which occurs in our fauna indicate the following tribes:

1.	Prothorax not prolonged over the head, which is oblong and prominent; tarsi with fourth joint smaller or indistinct; third joint usually bilobed..............	2.
	Prothorax prolonged over the head, which is deeply immersed and globose; tarsi filiform, 5 jointed........	**TOMICINI.**
2.	Ventral surface ascending obliquely,..................	**SCOLYTINI.**
	" " regularly cylindrical..................	**HYLESINI.**

Tribe I. TOMICINI.

Although the genera of this tribe are the farthest removed from *Cossonidæ* by their characters; they are in some respects the most nearly allied to *Platypus*, with which the family must naturally commence, on account of the relations between the latter and *Brenthidæ*.

The head is globose, or nearly so, and deeply immersed in the prothorax; the eyes are transverse, sometimes divided, (*Xyloterus*); the front is not prolonged into a beak; the antennæ are inserted near the base of the mandibles; the scape is long and stout, the funicle short, composed of from one to five joints, the mass large, compressed, varying in form and structure according to genus. Prothorax more or less cylindrical behind, prolonged in front over the head and much rounded, so that the anterior opening becomes very oblique, or even sometimes, almost horizontal; the sculpture is peculiar, and consists for a greater or less distance from the apex of sharp granules, or little spines; behind, the surface is smooth or punctured; the side margin is not distinct.* The mesonotum is never carinate as in *Platypus*. Elytra suddenly declivous in front, so that the edge fits against the base of the pronotum; usually obliquely excavated and toothed on the posterior declivity; ridge on inner surface near the outer margin, effaced near the tip; groove very deep and narrow. Pygidium entirely covered. Mesosternum acute behind, side pieces obliquely divided, epimera small, not attaining the coxæ, Metasternum rather long, side pieces narrow. Ventral segments five; first and second longer, closely united; fifth longer than the fourth, rounded behind, edge acute, fitting under the elytral edge. Front coxæ large, globose, prominent and contiguous; middle coxæ nearly contiguous; hind coxæ also.

Legs stout, thighs thick, not toothed; tibiæ compressed, armed with a large hook at the inner angle of the apex; outer edge serrate and acute; rarely flattened, with two edges, between which are transverse ridges, somewhat as in *Platypus*. Tarsi slender; fourth joint very small, but distinct; fifth joint long, with large, divergent simple claws.

Crypturgus and *Dolurgus* seems to me more properly placed in the tribe *Hylurgini*. The other genera represented in our fauna arrange themselves naturally into groups, according to the structure of the club of the antennæ.

Club large, oval, compressed, pubescent and transversely annulated on both sides, sutures straight or slightly curved; inner face usually broadly concave; tibiæ serrate.......	**Corthyli.**
Club large, oval, solid, pubescent on both sides; eyes completely divided; tibiæ serrate.........................	**Xyloteri.**
Club small, entirely corneous on the inner face, obliquely truncate on the outer face; truncature spongy and sensitive, marked with two concentric lines, or transverse sutures, or entirely terminal and narrow; tibiæ serrate....	**Xylebori.**
Club large, oval or rounded, compressed, entirely corneous on the inner face, more or less pubescent on the outer face, and divided by two or three sutures, which are usually sinuated or angulated; declivity of elytra deeply concave with acute margin, usually strongly toothed; funicle of antennæ with five distinct joints; tibiæ coarsely serrate..	**Tomici.**
Club elongate-oval, marked on each side by sutures which are sometimes long and curved, but sometimes nearly straight; the basal joint corneous, others pubescent; funicle 5-jointed; elytra convex behind, with the suture slightly prolonged; tibiæ fringed with hair, but not serrate; tarsi usually with joints 1–3 rather stout, fourth very small, fifth long and slender.........................	**Micracides.**

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*One at least of the groups (*Eutomides*), mentioned by Lacordaire, having the flanks separate from the pronotum, must be excluded from this family; it is allied to *Rhipidandrus* Lec., which I placed in *Tenebrionidæ*. Its position and affinities are still doubtful. Vide Chapuis, Mem. Soc. Roy, Liége, 1869, 6; Horn, Trans. Ent, Soc. 1875, 151.

Group I. **Corthyli.**

In this group the species are mostly of very small size, and are easily recognized by the club of the antennæ, which is pubescent and annulated with nearly straight sutures on both sides. One species of *Micracis* (*hirtellus*), as will be seen below, has a nearly similar club, and shows thereby a resemblance to the present group, but is otherwise so closely allied to the other *Micracis* that I have not been disposed to separate it from them. The funicle varies from one to five joints; the tibiæ are serrate or ridged transversely on the outer side; the tarsi are slender, the fourth joint distinct; fifth long, with simple, divergent claws. The anal segment of the ♂ is occasionally visible from beneath.

The genera may be thus separated:

1. Funicle 1-jointed..........................	2.
" 2–5-jointed.........................	3.
2. Body robust.............................	CORTHYLUS.
Body slender............................	MONARTHRUM.
3. Outer part of funicle rather slender..........	PITYOPHTHORUS.
" " " very short.............	HYPOTHENEMUS.

CORTHYLUS Er.

The body is much more robust than in *Monarthrum*, and the upper surface is strongly punctured. The club of the antennæ, connected with the 1-jointed funicle by a short slender peduncle, is much larger, opaque, finely pubescent, not fringed. The front tibiæ are flattened and margined on the outer face, but there are no transverse ridges as in *Monarthrum*, and only three acute teeth on the anterior edge near the tip; the tarsi are less slender, the 1st joint is a little shorter than the 2d; the 2d and 3d are equal, the 4th small, 5th as long as the 2d and 3d united, slender, claws divergent, simple, ventral segments subequal, 5th not longer than 4th, truncate; pygidium convex, partly inflexed, distinctly visible from beneath; 1st ventral suture deeply impressed.

The pronotum is marked with a fine lateral line near the hind angles, and along the base; the prosternum is extremely short in front of the coxæ. Neither of these characters occurs in *Monarthrum fasciatum*, but the first of them exists in the other species which I have referred to that genus.

1. **C. punctatissimus.** *Crypturgus punct.* Zimm., Trans. Am. Ent. Soc. 1868, 144.

♂. Head flattened, opaque, slightly and broadly concave at the middle.

♀. Head slightly convex, shining, punctured.

Middle, Southern and Western States; rare. Length 4 mm.; .15 inch.

MONARTHRUM Kirsch.

In this genus the body is elongate and cylindrical; the scape of the antennæ is long and slender, the funicle of but one short joint, the others being absorbed in the club, which is rounded, very much compressed, with two deep straight transverse sutures, fringed at the end with very long ciliæ or bristles in the ♂, or even (*mali*) furnished with a long spine; eyes slightly emarginate. Prothorax much longer than wide, disc finely asperate in front, alutaceous behind; anterior opening oblique. Elytra elongate, nearly perpendicularly declivous behind, and pubescent on the declivity; feebly punctured in rows. Front tibiæ flattened on the outer side, with two distinct edges, between which are transverse ridges; tarsi long and slender; first joints longer; 2–3 equal, fourth small, fifth as long as second and third united. Ventral segments first and second longer; third, fourth, and fifth short, equal, the last broadly rounded at tip, nearly truncate. Anal segment present in both sexes, perpendicularly declivous, small, triangular, with rounded angles.

A. Club of antennæ of ♂ fringed at the tip with long hairs; CORTHYLOMINUS Ferrari..............
Posterior declivity of elytra hairy; elytra yellow, with the posterior third black............ ... **1. fasciatum.**
B. Club of antennæ of ♂ with a long acute spine, and a few hairs; COSMOCORYNUS Ferrari.
Larger, piceous, elytra brownish at base, pubescent at tip.................................. **2. scutellare.**
Smaller, brown, prothorax testaceous behind, elytra not hairy at tip............................ **3. dentigerum.**
Smaller, brown; elytra not hairy at tip, suture deeply impressed on posterior declivity....... **4. mali.**

1. **M. fasciatum.** *Bostrichus fasc.* Say, Journ. Ac. Nat. Sc. Phila. v, 255; ed. Lec. ii, 318; *Crypturgus fasc.* Zimm., Trans. Am. Ent. Soc. 1868, 143; *Corthylominus fasc.* Ferrari, Tomicides, 48; *Pterocyclon simile* Eichhoff, Berl. Ent. Zeitschr. 1868, 277.

♂. Club of antennæ fringed with very long hairs; posterior declivity of the elytra slightly concave near the suture, with one small tubercle towards the upper part; feebly margined near the tip,

♀. Club of antennæ with only a few shorter marginal hairs; declivity of elytra more strongly margined near the tip; the tubercle is replaced by a long elevation, parallel with the suture, slightly cuspidate in front.

Lake Superior to Florida. Length 2.4 mm.; .10 inch. The head is large, flat and opaque in both sexes, but is slightly impressed in the ♀.

2. **M. scutellare.** *Corthylus scut.* Lec., Pac. R. R. Expl. and Surveys, Insects, 49 (♂); *Corthylomimus scut.* Ferrari, Tom. 49; *Cryphalus cavus* Lec., Trans. Am. Ent. Soc. 1868, 153, (♀).

♂. Club of antennæ with a few long hairs at the tip; armed with a long porrect spine on the outer margin; declivity of the elytra flat, margined near the tip, with three small denticles each side near the suture, and along the upper part; also two others on the face of the declivity, which is slightly hairy. Head flat, fringed with hairs.

♀. Club of antennæ oval-rounded without apical spine; declivity of elytra deeply concave, slightly hairy, bounded by a sharp edge, from the tip for nearly two-thirds its length; this edge terminates in a cusp at the anterior end; the three small denticles at the upper margin of the declivity are much stronger than in the ♂. Head slightly convex, not fringed with hairs, coarsely punctured, finely rugose and opaque near the tip.

California; San Jose and Fort Tejon. Length 3.5 mm.; .14 inch.

3. **M. dentigerum.** *Cryphalus dentiger* Lec., Trans. Am. Ent. Soc. 1868, 154.

♀. Club of antennæ not fringed; declivity of elytra retuse at the side, deeply concave towards the suture, with an acute cusp in the concavity each side, about equidistant from the suture and the apex, which is acutely and strongly margined. Head flat, opaque. ♂ unknown.

One ♀, Middle California, given me by Dr. Horn. The posterior half of the prothorax, the antennæ and legs are yellow-testaceous; the rest of the body is blackish brown. Length 2 mm.; .08 inch.

4. **M. mali.** *Tomicus mali* Fitch, N. York Reports on noxious Insects, iii, p. 8, No. 5; Zimm., Trans. Am Ent. Soc. 1868, 143; *Pterocyclon longulum* Eichoff, Berl. Ent. Zeitschr. 1868. 278.

♂. Club of antennæ with a long apical spine, and a few hairs; declivity of elytra oblique, not retuse at the sides, acutely margined only at the apex, and for a short distance behind; face of declivity with a slight reniform elevation rising into two cusps near the suture, which is deeply impressed and excavated at that place: head flat, opaque, not fringed with hairs.

♀. Club of antennæ without apical spine; declivity of elytra as in ♂, but with the reniform elevation and its two cusps much stronger; head slightly convex, sub-opaque, feebly punctured.

Lake Superior to Florida; depredates on apple trees. Length 2 mm.; .08 inch. By a typographical error I cited Dr. Fitch's Second Report for this species.

PITYOPHTHORUS Eichhoff.

Under this name I would associate most of the species which I formerly called *Cryphalus*, but which differ from *Cryphalus tiliæ* by having the sutures of the antennal club transverse, nearly straight and visible on both sides, instead of strongly curved, as in that species. The funicle of the antennæ consists of two parts; the first joint rather large, as usual, and about as wide as long; the remainder is narrow at base, gradually becoming broader, and forming a stem to the club; this stem is divided by three transverse sutures which are frequently very indistinct, and I consider their number as having little value.

The front tibiæ are compressed, with one acute outer edge, but no flattened space as in *Monarthrum*; this edge is very feebly serrate; the joints 1–3 of the tarsi are subequal and rather stout, the fourth is small; fifth about as long as the others united; claws large, divergent.

A. Club of antennæ nearly smooth on the outer surface, and indistinctly annulated, sparsely fringed with long hairs; upper surface pubescent, sutures deep, slightly curved. Hairs of the body slender, not verticellate nor serrate; elytra feebly punctured; prothorax asperate in front, nearly smooth behind. Fifth ventral segment broadly rounded behind, pygidium but slightly visible from beneath; GNATHOTRICHUS Eichhoff.

1.	Posterior declivity of elytra not retuse	2.
	" " " retuse, concave near the suture....................................	1. **retusus.**
2.	Prothorax moderately rough in front..............	2. **materiarius.**
	" very rough in front, size much smaller..	3. **asperulus.**

1. **P. retusus.** *Cryphalus ret.* Lec., Trans. Am. Ent. Soc. 1868, 155, (♀); *C. sulcatus* Lec., ibid. 155, ♂.

♂. Front finely and convergently striate; posterior callosity of the elytra less prominent.

♀. Head shining, sparsely and strongly punctured; posterior callosity of elytra more prominent.

California, Oregon and Vancouver Island. Length 3.5 mm.; .14 inch.

2. **P. materiarius.** *Tomicus mat.* Fitch, N. York Reports on noxious Insects, iv, p. 41, No. 246; *Crypturgus mat.* Zimm., Trans. Am. Ent. Soc. 1868, 143; *Gnathotrichus corthyloides* Eichhoff, Berl. Ent. Zeitschr. 1868, 275.

♀. Head shining, sparsely but strongly punctured.

♂. Unknown to me.

Canada to Texas. Length 2.5 mm.; .10 inch. Infests pine timber. The galleries as figured by Dr. Fitch, are remarkable for the branches being short, parallel, and at right angles to the main gallery. He also observes, what is probably true of all the species which mine into the wood, instead of simply under the bark, that the females are vastly more numerous than the males.

3. **P. asperulus.** *Cryphalus asp.* Lec., Trans. Am. Ent. Soc, 1868, 155. Virginia, Mr. E. T. Cresson; one female; the head is retracted, but so far as I can see seems to be flat, and punctured as in the preceding. Length 1.5 mm.; .06 inch.

B. Club of antennæ distinctly annulated and pubescent on both sides, not fringed with long hair. Hairs of the body stout or slender, not verticellate nor serrate. Prothorax asperate in front, finely punctulate behind. Elytra punctulate and pubescent. Front tibiæ moderately serrate, front tarsi with joints 1–3 stout; fifth longer than the others united. Pygidium scarcely visible from beneath.

Elytra scarcely punctulate; hairs stout, short......	4. **minutissimus.**
Elytra finely punctulate; hairs longer, and short, intermixed..........	5. **pubipennis.**
Brown, shining, more slender, more strongly punctulate, hairs sparse, fine..........................	6. **pilosulus.**

4. **P. minutissimus.** *Tomicus pusillus*‖Harris, Trans. Nat. Hist. Soc. Hartford, 83; *Crypturgus*‡ *min.* Zimm., Trans. Am. Ent. Soc. 1868, 143 (nec Fitch, N. York Reports on noxious Ins, iv. No. 245).

♂. Head deeply concave, edges of concavity fringed with long, yellow, silky hairs.

♀. Head punctured, slightly hairy.

Middle and Southern States. Length 1.8 mm.; .07 inch. If the name *T. pusillus* ‖ is to be cited under any species it must be for this, which agrees very well with the description of Dr. Harris, That mentioned by Dr. Fitch is quite different, and is closely allied to *P. ramulorum* Perris, which is considered by Eichhoff as the same with *typographus* Ratz.

5. **P. pubipennis.** *Tomicus pub.* Lec., Pac. R.R. Expl. and Surv. Ins. 59; *Cryphalus pub.* Lec., Trans. Am. Ent. Soc. 1868, 156.

♂. Head deeply concave; edge of the concavity fringed with long silky hairs.

♀. Head shining, sparsely hairy, punctured with an interocular tubercle.

San Jose, California; the longer hairs of the elytra are arranged in rows.

6. **P. pilosulus.** *Cryphalus pil.* Lec., Trans. Am. Ent. Soc. 1868, 156.

♂?

♀. Front flat, opaque, with a finely impressed median line.

Middle California. I have but two specimens, and in one the head is retracted upwards so that no part of the upper surface is visible. Length 2 mm.; .08 inch.

C. Club of antennæ distinctly annulated and pubescent on both sides, not fringed with long hair. Hairs of body slender, verticellate and serrate, especially on the head and prothorax. Prothorax asperate in front, punctured behind. Elytra punctured, sparsely pubescent. Front tibiæ finely or feebly serrate in most species.

1.. Pygidium strongly inflexed, causing the fifth ventral segment to appear broadly emarginate........ 2.
Pygidium but slightly visible from beneath, fifth ventral broadly rounded or subtruncate................ 4.
2. Elytra retuse behind, without cusps; eyes emarginate.................................. ..... 3.
Elytra retuse behind, each with two cusps; eyes not emarginate.................................. 7. **carinulatus.**
Elytra with coarse punctures arranged somewhat in rows.. 8. **pullus.**
Smaller and stouter, elytra with large punctures not arranged in rows............................ 9. **pulicarius.**
4. Elytra retuse behind, and concave along the suture. 5.
“ not retuse on posterior declivity....... ..... 7.

5. Elytra strongly punctured in approximate rows..... **6.**
   " strongly and confusedly punctured......... **10. carinicep**s.
   Elytra finely and confusedly punctured .... **11. fossifrons.**
6. Larger and stouter, rows of punctures confused towards the suture.......................... **12. confinis.**
   Smaller and more slender, rows regular approximate **13. nitidulus.**
   Much smaller, rows more distant, asperities of prothorax not concentric.......................... **14. puncticollis.**
   Much smaller, rows stronger, asperities of prothorax concentric................................ **15. lautus.**
7. Elytra punctured in rows......................... **8.**
   " confusedly punctured, hairs erect............ **16. puberulus.**
8. Rows of punctures irregular, approximate.......... **17. digestus**
   " " fine and distant; prothorax with an oval patch of dense hair each side............ **18. comatus.**

7. **P. carinulatus.** *Cryphalus car.* Lec., Trans. Am. Ent. Soc. 1874, 70. California, extending as far South as the Mojave region. The pubescence is long and erect, and the eyes are not emarginate. The dorsal line of the prothorax is narrow, smooth and distinctly elevated. Length 2–3 mm.; .08–.12 inch.

♂. Seven specimens agree in having the head dull, densely punctured, with a very large and deep excavation; the general surface of the head is thinly clothed with erect pubescence, but the anterior margin of the front, above the mandibles, is fringed with long, yellow prostrate hair.

♀ ?. One specimen differs in having the head more convex, less densely punctured, the excavation much smaller and less deep, with a distinct longitudinal elevation at the middle. The cusps of the declivity of the elytra are less prominent, and I am therefore in doubt if it should be referred to this species.

8. **P. pullus.** *Crypturgus*‡*pullus* Zimm., Trans. Am. Ent. Soc. 1868, 143; ? *P. bisulcatus* Eichhoff, Berl. Ent. Zeitschr. 1868, 274.

♂. Head strongly punctured, rather flat, broadly but slightly concave in front.

♀. Head strongly punctured, uniformly convex, with a slight callus on the front.

Middle States. The declivity of the elytra is almost without cusps, and is slightly more retuse in the ♀ than in the ♂, but the suture is strongly elevated in both. Length 2.3 mm.; .09 inch.

P. pulchellus Eichhoff, l. c. 275, seems to be closely allied to this species, and to differ chiefly by the prothorax strongly, rugosely punctured behind, and the suture less elevated. If the locality be California, then it may possibly be *P. puncticollis*, but until the species of this author are described with some reference to allied species, or synoptic tables prepared, they cannot be satisfactorily identified.

9. **P. pulicarius.** *Crypturgus‡pul.* Zimm., Trans. Am. Ent. Soc. 1868, 144.

Illinois, South Carolina and Florida; four specimens, in which there is no sexual difference; the head is punctured and convex, with a very small frontal callus. The form is stouter, the size much smaller, and the punctures coarser than in our allied species; the pubescence is sparse, long and erect. Length 1.5 mm.; .06 inch.

10. **P. cariniceps**, n. sp.

Rather slender, cylindrical, blackish piceous shining, pubescence fine, sparse and erect, Head (♂) finely punctured, opaque, with two very deep excavations, extending almost to the front margin, and separated by a narrow, elevated, longitudinal carina; eyes deeply and narrowly emarginate. Prothorax longer than wide, anterior half densely asperate, separated from the posterior half by a shallow, transverse impression; posterior half shining, distinctly but not densely punctured, smooth dorsal line not elevated, base distinctly margined. Elytra strongly punctured, punctures arranged partly in rows; declivity strongly retuse, with a few little asperities on the highest part of the elevation; suture slightly impressed, and marked with a row of punctures as far as the declivity, where it becomes smooth and deeply impressed, concavity smooth, broader at the tip. Pygidium scarcely visible from beneath; fifth ventral not longer than fourth, broadly rounded behind. Antennæ and legs yellow-brown; club transversely annulated with curved sutures; outer part of funicle indistinctly divided into four parts; tibiæ with two or three feeble teeth towards the tip. Length 2.5 mm.; .10 inch.

Detroit, Michigan; Messrs. Hubbard and Schwarz; one ♂. The pubescence has probably been partly abraded. The peculiar sculpture of the head induces me to believe that the reference of the supposed ♀ under *P. carinulatus* may be erroneous, and that it probably indicates a distinct species, which, however, cannot be correctly defined from want of sufficient material.

11. **P. fossifrons**, n. sp.

Of the same form and color as the last, but the head (♂) has one round and very deep fovea, and the eyes are not emarginate. Prothorax longer than wide, asperate on the front half, strongly and deeply punctured behind; smooth dorsal line narrow, distinctly elevated towards the middle of the disc. Elytra rather finely and not regularly punctured; pubescence long, erect; sutural stria visible, deeply excavated behind; declivity slightly retuse, with two indistinct cusps. Antennæ and legs yellow-brown, of the same form as in the last. Length 2.3 mm.; .09 inch.

Vancouver Island; Messrs. Matthews; two ♂ specimens. This species resembles *P. carinulatus* in sculpture, and in the form of the eyes; but the excavation of the head is smaller, deeper and more pit-like; the posterior callosity of the elytra is less prominent; the cusps are small and feebly developed, and finally the pygidium is much less inflexed, so as to be hardly visible from beneath.

12. **P. confinis**, n. sp.

Rather slender, piceous black, shining, (nearly glabrous?). Eyes deeply emarginate. Prothorax a little longer than wide, strongly asperate over a circular space extending from the middle to the tip, coarsely punctured on the rest of the surface; smooth dorsal line not elevated, obsolete in some specimens; base finely margined. Elytra strongly punctured; punctures here and there arranged in approximate rows, but confused towards the suture; declivity retuse, but without cusps, concavity smooth, sutural stria deeply excavated behind. Antennæ and legs brown, of the same form as in those above described. Pygidium, except when protruded, but slightly visible from beneath; fifth ventral not longer than fourth, and not emarginate. Length 2.5 mm.; .10 inch.

♂. Head clothed with long yellow hair.

♀. Head nearly glabrous, shining, punctured, with a large, obtuse elevation on the vertex.

California; Mojave Region, Mr. Crotch. Nearly allied to the next species but more coarsely sculptured. The head of the male is retracted to such an extent that I cannot see distinctly whether it is excavated or flat, but I think the latter is the case.

13. **P. nitidulus.** *Bostrichus nit.* Mann., Bull. Mosc., 1843, 298; 1846, 359; *Cryphalus nit.* Lec., Trans. Am. Phil. Soc. 1868, 157; *C. atratulus* Lec., ibid., 156; ? *P. cribripennis* Eichhoff, Berl. Ent. Zeitsch. 1868, 274; ibid., 1871, 137.

♂. Head flat, finely punctured, not opaque; clothed with long, erect yellow hairs.

♀. Head much less hairy; elytra more retuse behind.

Alaska and California. Examination of a larger series of specimens indicates that the synonym was founded upon a slight individual variation in the form of the prothorax. Length 2 mm.; .08 inch.

14. **P. puncticollis.** *Cryphalus punct.* Lec. Trans. Am. Ent. Soc. 1874, 71.

California, one ♂. Closely related to *P. nitidulus*, and with the same sexual differences, but much smaller, and of a reddish brown color, with the rows of punctures on the elytra more distant, and a little finer. Length 1.5 mm.; .06 inch.

15. **P. lautus** Eichhoff, Berl. Ent. Zeitschr, 1871, 135.

A very small specimen from Texas closely resembles *P. puncticollis*, but the asperities of the prothorax are arranged in four or five transverse rows; the punctures of the rows of the elytra are larger, and the rows are better defined; the declivity as in that species is retuse, and deeply sulcate along the suture. Length 1.5 mm. .06 inch.

16. **P. puberulus** *Cryphalus pub.* Lec., Trans. Am. Ent. Soc. 1868, 157.

One ♀, District of Columbia; Mr. Ulke. Easily known by the very small size and erect pubescence. The elytra are finely and densely punctulate, and not retuse behind, though the sutural stria is deeply impressed. Length less than 1.5 mm.; .06 inch.

17. **P. digestus.** *Cryphalus dig.* Lec., Trans. Am. Ent. Soc. 1874, 171.

Mojave Desert, California; Mr. Crotch. Eleven specimens without sexual differences, all having the head punctured and finely carinate. The elytra are confusedly punctured, but the punctures have a tendency to form rows; they are not retuse behind, but the sutural stria is deeply impressed. Length 1.7 mm.; .07 inch.

18. **P. comatus.** *Crypturgus*‡*com.* Zimm., Trans. Am. Ent. Soc. 1868, 143.

South Carolina; Dr. Zimmermann. The specimen is a ♂, and has the head nearly smooth, broadly and deeply concave, thinly fringed with not very long yellow hair. The species is easily recognized by the large elliptical patch of yellow hair each side of the prothorax, and by the fine distant rows of elytral punctures; the declivity is not retuse, and the sutural stria is deeply impressed. The club of the antennæ is divided by three distinct straight sutures. I am not certain of the number of divisions in the outer part of the funicle. Length 1.8 mm.; .07 inch.

It is possible that *P. infans* Eichhoff, Berl. Ent. Zeitsch, 1871, 135, may be the ♀ of this species. It is, however, unknown to me, and I have seen nothing that corresponds with the description.

HYPOTHENEMUS Westwood.

The species I refer to this genus agree in having the outer part of the funicle of the antennæ very short, shorter in fact than the first joint, and very indistinctly divided; in the first species only by one transverse suture; but in *H. dissimilis*, the divisions seem more numerous, probably three, but so indistinct that they are without value. The head is larger and more exserted than in the preceding genera; eyes narrowly emarginate; the club of the antennæ is round, compressed, moderate in size, and divided by straight sutures on both sides. The tarsi are distinctly 5-jointed, the third joint rather longer than the first or second; the fourth small as usual; fifth elongate. The tibiæ are distinctly serrate towards the tip. The declivity of the elytra is not retuse or sulcate.

A. Body cylindrical, asperities of prothorax acute and numerous.

Brown, hairs stout, clavate, erect, finely striate like the spines of some Echini.................................. 1. **hispidulus.**

B. Body stouter, prothorax more rounded, with fewer and larger asperities.

Hairs erect stout, clavate.................................. 2. **erectus.**

Hairs slender, longer.................................. 3. **dissimilis.**

C. Body elongate; prothorax with scarcely any asperities.

Elytra very strongly punctate-striate.................................. 4. **striatus.**

1. **H. hispidulus.** *Cryphalus hisp.* Lec., Trans. Am. Ent. Soc. 1868, 156.

Middle and Southern States. Exactly resembles in appearance *H. eruditus* W.W. (specimens of which I owe to the kindness of Professor Westwood), but is rather larger, and the head and prothorax are dark piceous, like the elytra. It varies much in size, one specimen from Florida being scarcely larger than *H. eruditus*. Length 1-1.5 mm.; .04-.06 inch.

This is probably *Stephanoderes seriatus* Eichhoff, Berl. Ent. Zeitsch. 1871, 133; but the head is not retracted into the prothorax. There are 6-8 small teeth on the apical margin, just as in *H. eruditus*.

2. **H. erectus**, n. sp.

Elongate-oval, rather robust, brown, thinly clothed with short pubescence, which is stout and erect especially near the tip of the elytra. Head large, exserted, opaque; with a somewhat sericeous lustre from extremely minute striæ; front flattened. Prothorax not longer than wide, very convex, rough in front with a few large acute elevations, general surface finely punctured. Elytra blackish, with lightly punctured striæ becoming deeper towards the sides. Antennæ and legs yellowish. Length 1.7 mm.; .07 inch.

Two specimens, Texas; Belfrage. This species closely resembles the next, and only differs by the shorter and stouter hairs of the elytra, which are almost as in *H. eruditus*. There are not more than ten or twelve acute tubercles on the front part of the prothorax; and there are two small approximate teeth on the apical margin itself.

It is quite possible that this is *Stephanoderes Chapuisii* Eichhoff, Berl. Ent. Zeitschr. 1871, 132; but the head is not retracted into the prothorax, as required by the generic description.

3. **H. dissimilis**. *Crypturgus diss.* Zimm., Trans. Am. Ent. Soc., 1868, 144.

Lake Superior to Georgia. Larger and stouter than the preceding, with the pubescence longer and finer; the apical margin of the prothorax has two approximate erect teeth. I observe no sexual differences in the seven specimens examined. Length 2 mm.; .08 inch.

The size and specific characters agree moderately with those of *Cryphalus robustus* Eichhoff, loc. cit., 1861, 130.

4. **H. striatus** *Cryphalus str.* Lec., Trans. Am. Ent. Soc. 1868, 156.

California, Lower and Upper, and Illinois. Resembles somewhat, in appearance, the Azorian genus *Liparthrum*, but differs by the tarsi having the joints 1-3 equal and distinct.

♂. Head punctured, with a large transverse frontal elevation.

♀. Head punctured, with a small round frontal fovea.

Group II. Xyloteri.

The insects of this group are rather robust and cylindrical; the declivity of the elytra is oblique, not excavated and not toothed. The eyes are completely divided, and the club of the antennæ is oval, solid, pubescent on both sides, and not annulated. The tibiæ are broad, rounded at tip, and serrate on the outer and terminal edge. The tarsi are slender, the fourth joint small, as usual, and the fifth long, with simple divergent claws. The species bore deeply into the wood of the trees they attack, thus injuring the timber much more than the subcortical *Tomici*.

XYLOTERUS Er.

In this genus the club of the antennæ is oval, compressed and solid, without articulations; the basal shining corneous part extends forwards in a narrow band as far as the middle, except in *X. politus*, where it is entirely basal, and the club is indistinctly divided by one round suture; the rest of the surface is opaque, finely pubescent and sensitive. The funicle is composed of two parts, as in the two preceding genera; the first joint is large, and stout as usual, the remaining part is about equal in length, forming a pedicel to the club, and is divided by two not well marked transverse sutures, thus causing the funicle to be 4-jointed. The eyes are moderately finely granulated and completely divided. The head is large, exserted, and in the ♂ is deeply concave. The prothorax is broader than long, and strongly asperate in front in the ♀, less so in the ♂. The tibiæ are dilated, finely serrate on the outer edge, rounded at tip, and very feebly mucronate at the inner angle; the tarsi have the joints 1–3 rather stout, nearly equal in length; fourth very small, fifth slender, as long as the second and third united, with simple divergent claws. The hairs are not serrate or verticillate, as in *Pityophthorus*, but slender and smooth.

The four species in our fauna are easily recognized:

Elytra with well defined striæ of punctures, interspaces nearly smooth.................................. **2.**
Elytra with ill-defined distant rows of punctures, interspaces equally strongly punctured, pubescence erect, abundant.................................. **4. politus.**
2. Prothorax finely and sparsely punctured at the sides towards the base.............................. **1. retusus.**
Prothorax finely but less sparsely punctured at the sides towards the base......................... **2. bivittatus.**
Prothorax scabrous and granulate behind the middle **3. scabricollis.**

1. **X. retusus** Lec., Trans. Am. Ent. Soc. 1868, 158.

Canada one ♂. It is quite possible that this is only an extraordinarily developed specimen of the next, but as I have seen no intermediate forms, I would suggest that for the present, it be retained as a distinct species. It is of larger size, (4.5 mm.; .18 inch), rather stouter, with the prothorax more suddenly declivous, and distinctly retuse in front, and less punctured on the sides behind the middle. Otherwise the differences are chiefly in color, which is of no value in this genus.

2. **X. bivittatus** Mannh., Bull. Mosc. 1853, 236; *Apate biv.* Kirby, Faun. Bor. Am. iv, 192, pl. 8, f. 5; *Bostrichus cavifrons* Mannh., Bull. Mosc. 1843, 297 (♂); ibid. 1852, 359; *Xyloterus cav.* Mannh., ibid. 1852, 385.

Maine, Canada, Alaska, Vancouver Island. Length 3–3.3 mm.; .12–.13 inch. Varies greatly in color. Usually the front part of the prothorax, the suture and the margin of the elytra are black; sometimes only a short, pale stripe is seen on each elytron.

3. **X. scabricollis** Lec. Trans. Am. Ent. Soc. 1868, 158.

District of Columbia, one ♂; Mr. Ulke. This species has entirely the form and sculpture of *X. bivittatus*, except that the prothorax instead of being punctured behind the middle, is covered with flat granules, produced by anastomosing rugæ, and the front part is as rough as in the ♀ of *X. bivittatus*. The striæ of punctures on the elytra are also deeper, and the color is different; the head and elytra are piceous, and the prothorax dull, ferruginous; the antennæ and legs, as usual, are yellow testaceous. Length 3.5 mm.; .14 inch.

4. **X. politus** Say, Journ. Ac. Nat. Sc. v, 256 (*Bostrichus*); ed. Lec. ii, 318; Lec., Trans. Am. Ent. Soc. 1868, 159.

Massachusetts to Kansas and Georgia. Length 3.3 mm.; .13 inch.

I have received specimens from Mr. J. A. Lintner, as depredating upon maple trees. Easily known by being more hairy than the other species, with the interspaces of the elytra sparsely punctured, so that the rows of punctures appear confused. I observe no sexual difference in the specimens before me, and the species may readily be separated as a distinct genus, by any one who will avail himself of the characters in the antennal club, which I have pointed out above.

X. unicolor Eichhoff, Berl. Ent. Zeitschr., 1871, 136, is unknown to me, but seems to be allied to *X. politus*.

Group III. **Xylebori.**

The essential character of this group is that the club of the antennæ is entirely corneous, and not articulated on the inner surface; on the outer surface it is also corneous, except towards the distal end, where it is obliquely truncate; the truncate surface is pubescent and sensitive, and has three concentric or transverse sutures, which indicate the other joints of the club. The scape of the antennæ is elongate, and the funicle usually distinctly 5-jointed, though in some species there appear to be but four joints. The tibiæ are dilated, more or less serrate, and spinose on the outer margin, with the apex obtusely rounded, and the inner angle not very strongly unguiculate. The tarsi are slender; fourth joint small, fifth nearly as long as the others united; claws strong, divergent, simple.

Sensitive surface of antennæ concentrically annulated... **XYLEBORUS.**
Sensitive surface of antennæ with straight, transverse sutures.................................... **DRYOCŒTES.**

XYLEBORUS Eichhoff.

A. Body stout, cylindrical; declivity of elytra oblique, scarcely flattened; funicle of antennæ with four distinct joints; tibiæ finely serrate on the distal half of their length, and rounded at tip.

Declivity of elytra without elevated granules...... 2.
" " with a few acute " .... 1. **tachygraphus.**
2. Cylindrical, rather elongate.................... 2. **pyri.**
Very stout, oval cylindrical........................ 3. **obesus.**

B. Body elongate, cylindrical; declivity of elytra oblique, frequently retuse or excavated; funicle of antennæ with five distinct joints; tibiæ rounded at tip, and finely serrate, except in the species under 6.

Declivity of elytra flattened; tibiæ finely serrate.. 2.

" " deeply impressed along the suture, tibiæ more coarsely serrate, not rounded at tip.................................... 6.

2. Declivity with a few prominent tubercles......... 3.

" with rows of small granules............ 5.

3. Prothorax deeply impressed in front.............. 4.

" not impressed; declivity with two acute tubercles each side, and some smaller marginal ones.................................... 4. celsus.

4. Declivity with one large, acute tubercle.......... 5. fuscatus.

" with a few prominent acute tubercles.... 6. biographus.

" " but two very small granules........ 7. retusicollis.

5. Declivity of elytra with four or five granules on the first, third and fifth interspaces.......... 8. xylographus.

Declivity of elytra with two or three granules on the first, third and fifth interspaces.......... 9. pubescens.

6. Declivity of elytra oblique, not sharply margined.. 7.

" " nearly perpendicular.......... 8.

" " with acute edge............. 9.

7. " " " two prominent tubercles, and some smaller marginal ones; elytra strongly punctured in rows, interspaces with rows of distant punctures.......................... 10. cælatus.

Declivity with two prominent tubercles, and some very indistinct marginal ones, elytra with rows of rather distant punctures.................. 11. impressus.

Declivity with some marginal tubercles, and two discoidal ones, with a third subsutural one, at the anterior part of the declivity, punctures distant, not arranged in rows.................. 12. sparsus.

8. Declivity nearly perpendicular, without discoidal tubercles, sharply margined, and armed with teeth in ♀, of which the upper one is hooked; obtuse and feebly toothed in ♂; elytra with distant punctures not arranged in rows....... 13. plagiatus.

9. Declivity nearly perpendicular, acutely margined, armed with a small tooth near the apex, and a long hooked process near the anterior end. Elytra with rows of feebly impressed small punctures.............................. 14. hamatus.

C. Prothorax densely punctured, not roughened in front, but broadly flattened, disc feebly and broadly sulcate; tibiæ finely serrate below, coarsely so above, rounded at tip; funicle of antennæ stouter, more closely connected with the club.

Elytra with approximate, ill-defined rows of feeble punctures; declivity flattened in ♂ with a few small acute granules; concave in ♀, with three or four prominent tubercles on the obtusely elevated margin.......................... **15. planicollis.**

1. **X. tachygraphus,** Zimm., Tr. Am. Ent. Soc. 1868, 440.

Middle and Southern States. Received from Col. Motschulsky, under the name *Corthylus denticulatus.*

2. **X. pyri** Zimm., l. c. 144; *Scolytus pyri* Peck., Mass. Agr. Journal, 1817, No. 3; *Tomicus pyri* Harris, Inj. Ins. ed. ult. 91.

Eastern and Middle States. Sometimes quite injurious to pear trees.

3. **X. obesus** Lec., Trans. Am. Ent. Soc. 1868, 159.

Canada to Virginia.

4. **X. celsus** Eichhoff, Berl. Ent. Zeitschr. 1867, 400; Zimm., Tr. Am. Ent. Soc. 1868, 145.

Middle and Southern States; under oak bark.

5. **X. fuscatus** Eichhoff, l. c., 1867, 400; Zimm., l. c. 1868, 145.

Virginia to Texas: under oak bark. The nearly allied species mentioned by me as occurring under pine bark in Georgia seems not to differ specifically from *X. impressus* mentioned below.

6. **X. biographus** Lec., Tr. Am. Ent. Soc. 1868, 160.

One specimen, Illinois.

7. **X. retusicollis** Zimm., Tr. Am. Ent. Soc. 1868, 146.

One specimen, Maryland; under oak bark.

8. **X. xylographus** Zimm., Tr. Am. Ent. Soc. 1868, 145; *Bostrichus xylogr.* Say, Journ. Ac. Nat. Soc. Phil. v, 256; ed. Lec. ii, 318: *X. pini* Eichhoff, Berl. Ent Zeitschr. 1867, 401.

Atlantic and Pacific districts; under pine bark; abundant.

9. **X. pubescens** Zimm., Tr. Am. Ent. Soc. 1868, 145.

Middle and Southern States.

10. **X. cælatus** Zimm., Tr. Am. Ent. Soc. 1868, 146; *Tomicus cæl.* Eichhoff, Berl. Ent. Zeitchr. 1867, 402; *X. vicinus* Lec., Tr. Am. Ent. Soc. 1874, 72.

Canada to Texas and California. In this and the four following species the sensitive annulated surface of the club is larger than in the preceding species, and the tibiæ are more strongly serrate. The specimens from the Pacific Coast do not differ sufficiently to warrant their being known as a distinct species.

11. **X. impressus** Eichhoff, Berl. Ent. Zeitschr. 1867, 400.

One specimen, Georgia; under pine bark.

12. **X. sparsus** Lec., Tr. Am. Ent. Soc. 1868, 160.

Canada and Lake Superior.

13. **X. plagiatus** Lec., Tr. Am. Ent. Soc. 1868, 161.

Maryland; Mr. Ulke; this species is remarkable for the sexual differences. The declivity of the elytra is oblique, and the surface is without tubercles, but the sutural stria is deeply impressed; in the ♂ there are two or three small acute granules on the obtusely rounded margin of the declivity, but in the ♀ these are much more prominent, and the anterior one near the suture is hooked.

14. **X. hamatus** Lec., Tr. Am. Ent. Soc. 1874, 80.

Mojave Desert, California. No sexual difference observed in ten specimens examined.

15. **X. planicollis** Zimm., Tr. Am. Ent. Soc. 1868, 145.

Maryland and District of Columbia; two specimens.

DRYOCŒTES Eichhoff.

In this genus the prothorax is not or but slightly roughened in front; it is less prolonged over the head than usual; the elytral declivity is oblique, hardly flattened, not armed with tubercles; tibiæ strongly serrate. The club of the antennæ is obliquely truncate, with the sensitive surface divided by transverse straight sutures.

Larger, prothorax strongly punctured, not roughened in front.................................. 1. **septentrionis.**
Smaller, prothorax strongly punctured, slightly roughened in front....................... ...... 2. **affaber.**
Smaller, prothorax uniformly densely granulate, elytra with deeper striæ.................................. 3. **granicollis.**

1. **D. septentrionis.** *Bostrichus sept.* Mann. Bull., Mosc., 1843, 298; *B. semicastaneus* Mann., ibid. 1852, 358; *Xyleboris sept.* Lec., Tr. Am. Ent. Soc. 1868, 161.

Alaska, Canada, Virginia; under pine bark. Length 4.4 mm.; .17 inch.

2. **D. affaber.** *Bostrichus aff.* Mann., Bull. Mosc. 1852, 359; *Xyleborus aff.* Lec., Tr. Am. Ent. Soc. 1868, 162.

Alaska, British Columbia, Lake Superior. Length 2.7 mm.; .11 inch.

3. **D. granicollis.** *Xyleborus gran.* Lec., Tr. Am. Ent. Soc. 1868, 162.

Pennsylvania and District of Columbia. Length 2 mm.; .08 inch.

CRYPHALUS Er.

The species of this genus are of very small size, not very slender form, and clothed with erect stout bristles; the funicle is composed of four joints, of which the first is larger and stouter, and the other three form a conical mass, thicker outwardly. The club is compressed, rounded-oval, entirely corneous and without sutures on the inner side, with straight or curved sutures on the outer side, eyes large, not emarginate; the prothorax has but few large acute tubercles in front; the elytra are punctured in rows, and the declivity is convex, not impressed; the tips are conjointly rounded. The first and second ventral segments are very large, the others very short. The tibiæ are only slightly dilated and scarcely perceptibly serrate.

1. **C. rigidus**, n. sp.

Dark brown, somewhat shining, of stout cylindrical, somewhat oval form, clothed with rather long erect pale bristles. Prothorax a little wider than long, convex, anterior edge not toothed, disc with a few distant acute tubercles in front of the middle, sparsely punctured behind. Elytra punctured in rows, setigerous punctures of the interspaces very small. Legs and antennæ yellow-brown; club oval, hairy, sutures curved, surface rather shining. Length 1 mm.; .04 inch.

♂. Front with a small rounded polished excavation.

Canada, five specimens, Dr. Horn. This species does not agree very satisfactorily with the descriptions of European authors, and I therefore venture to describe it as new.

2. **C. striatulus** Mann. Bull. Mosc., 1853, 235, Alaska, and

3. **C. robustus** Eichhoff, Berl. Ent. Zeitschr., 1871, 131, Am. bor.? are unknown to me.

Group. IV. **Tomici.**

The species of this group are of cylindrical, but not very slender form, and are easily recognized by the deeply excavated elytral declivity, which is sharply margined and acutely toothed. The club of the antennæ, as in the group *Xylebori*, is entirely corneous on the inner face, but is not obliquely truncate on the outer face. The sensitive surface is more or less distinctly defined, and is divided by two sutures which are more or less curved or angulated in our species, but are described in some European species as straight, thus showing an affiliation with *Dryocœtes* of the preceding group. The tibiæ are coarsely serrate, and the tarsal joints 1–3 are rather stouter than in the preceding groups.

Our species represent but one genus, which may be divided conveniently according to the form of the sutures of the antennal club.

TOMICUS Latr.

	Sutures of antennal club strongly angulated.....	2.
	First suture of club nearly straight, second bisinuate..............................	3.
	Sutures of club nearly straight..................	8.
	Sutures of club regularly curved, not angulated..	9.
2.	Margin of declivity with three teeth behind the most prominent one......................	1. **calligraphus.**
	Margin of declivity with two teeth behind the most prominent one, punctures and interspaces regular............................	2. **cacographus.**
	Margin of declivity with two teeth behind the most prominent one, punctures and interspaces confused...	3. **confusus.**
	Margin of declivity with but one tooth behind the most prominent one......................	4. **plastographus.**

3. Margin of declivity with three prominent teeth each side.................................. 4.
Margin of declivity with but two prominent teeth, the posterior longer, emarginate at tip........ **5. emarginatus.**
4. Cusps of the teeth, separate. acute.............. **5.**
Anterior teeth united, front cusp rectangular .... **6. rectus.**
5. Elytral striæ composed of larger more distant punctures.................................. **6.**
Elytral striæ composed of smaller approximate punctures.................................. **7. pini.**
6. Interspaces with rows of distant punctures extending nearly to the base.................. **7.**
Interspaces with punctures only near the declivity **8. hudsonicus.**
7. Punctures of striæ moderately distant .... **9. interruptus.**
" " more distant................ **10. tridens.**
8. Smaller, last tooth small, acute .... **11. avulsus.**
Last tooth long and slender, declivity more deeply concave.................................. **12. latidens**
9. Elytra more densely punctured, and scarcely in rows, posterior declivity less concave, with the lower tooth long and prominent.............. **13. concinnus.**

1. T. **calligraphus** Germ., Ins. Nov. 461; *Bostrichus exesus* Say, Journ. Ac. Nat. Sc. v. 255; ed. Lec. ii., 317; Zimm., Trans. Ent. Soc. 1868, 147; ? *Tomicus præmorsus* Eichhoff, Berl. Ent. Zeitschr. 1867, 401.

Atlantic region, as far west as New Mexico. The usual size is 5 mm.; .20 inch, but two specimens from the locality last mentioned measure 6.4 mm.; .25 inch. The sutures of the club resemble figure 1, Ferrari, p. 44, and are quite like those of the European *T. stenographus*; which differs by its larger size, more coarsely punctured prothorax, and especially by having but two teeth on the edge of the elytral declivity behind the most prominent tooth.

For the purpose of making the distinctions between the species mentioned below more intelligible, I will describe the arrangement of the teeth in this species, in which the number is greatest. The declivity is deeply concave, polished, sparsely punctured, and the prolongation of the sutural stria is well impressed. At the posterior end of the second interspace is a small cusp, and a similar one at the end of the third interspace; these two small cusps or denticles are not mentioned in the synoptic table given above. At the end of the fourth interspace is a large conical tubercle, which in this species is but slightly connected with the tubercle of the fifth interspace, *which is always the most prominent.* Behind this prominent one there are in the present species three acute equidistant teeth, and the apical acutely elevated margin. The disappearance of some of these teeth in the following species is produced by their absorption in the acute terminal margin, which thus becomes longer, so that in *T. pini* it extends around fully one-third of the declivity.

The dimensions and relations of these teeth with each other, and the arrangement of the sutures of the antennal club give excellent characters for the discrimination of the species; and I hope that the student will have no difficulty in recognizing those I have admitted in this memoir. The descriptions of those named by Mr. Eichhoff are, however, too indefinite for me to venture to pronounce with certainty upon their affinities; they seem, moreover, if I may judge from the short diagnoses, to have been unduly multiplied upon individual differences of slight importance.

2. **T. cacographus** Lec., Tr. Am. Ent. Soc. 1868, 162; *Bostrichus pini* ‡ Zimm. (nec Say), ibid, 147.

Southern and Western States. Similar to the preceding, but usually of smaller size, (3.5–4 mm.; .14–.16 inch); the cusp of the second interspace is very small, and that of the third is wanting; that of the fifth is compressed and scarcely more prominent than that of the fourth interspace and is somewhat connected with it; there are but two teeth between the tooth of the fifth interspace and the terminal acutely elevated margin, and these teeth are all of them less prominent than in *T. calligraphus*, in some specimens (♂), but equally prominent in others, ♀, those less acute than in *T. caligraphus*. The interspaces from the third outward are marked each with a regular series of punctures behind the middle, whereby it differs from the next species. The club of the antennæ is quite similar to that of *T. calligraphus*.

3. **T. confusus**, n. sp.

Quite like *T. cacographus*, except that the elytral striæ are composed of larger and more transverse punctures; the punctures of the interspaces are very distant as far as the middle, but become irregular and confused with the striæ behind. The teeth on the margin of the declivity are arranged just as in *T. cacographus*, but are larger and stouter, and the one of the fifth interspace has a tendency to become curved at the end. The club of the antennæ as in the two preceding species. Length 4 mm.; .16 inch.

Southern California and Arizona. I have seen but three specimens.

4. **T. plastographus** Lec., Tr. Am. Ent. Soc. 1868, 163.

Middle California and New Mexico; two specimens. This species closely resembles *T. confusus* in the sculpture of the elytra, the interstrial punctures being confused behind, but on the inner interspaces from the third to the fifth there are no punctures except near the declivity. The tooth of the fourth interspace is more compressed and closely united with the very prominent tooth of the fifth interspace, which is cylindrical and obtuse; there is but one tooth between that of the fifth interspace and the apical elevated margin, but this is large and conical. The sutures of the antennal club are very strongly angulated. Length 4.5 mm.; .18.

5. **T. emarginatus**, n. sp.

Cylindrical, shining, blackish piceous, sparsely clothed with long yellowish hairs. Head granulated, with two small frontal elevations, the anterior one near the margin, which is fringed as usual with short yellow hairs. Prothorax nearly one-half longer than wide, sides parallel, base broadly rounded, margined only near the side; anterior half of disc asperate with granules; posterior half strongly and tolerably densely punctured, without distinct dorsal smooth space. Elytra with striæ composed of strongly impressed transverse punctures, interspaces wide, 1–7 smooth except near the declivity, where there are a few punctures; outer interspaces with punctures gradually becoming confused near the sides; declivity deeply concave, strongly and coarsely punctured, with the sutural stria deeply impressed; the teeth of the second and third interspaces are small, but acute; that of the fourth is larger, conical and subacute; that of the fifth is large, compressed and emarginate; the interval between it and the apical elevated margin is wide, and in some specimens is marked by a single indistinct cusp; the apical margin is long, and its anterior angle is more prominent than usual; the sutural angle is slightly prominent, as is frequently the case in other species, a character of no importance. The sutures of the antennal club are nearly straight, slightly bent forwards at the sides. Length 6.6 mm.; .26 inch.

Oregon. Found in abundance by Lord Walsingham.

6. **T. rectus**, n. sp.

This species resembles the preceding in form and color; but is of smaller size, and the prothorax is less deeply punctured behind, with a distinct smooth medial space. The elytral striæ and interstrial punctures are similar, but the teeth of the declivity are quite different; the cusps of the second and third interspaces are small, but distinct and acute; that of the fourth is broad, compressed and closely united with that of the fifth, which forms a prominent tooth at its posterior extremity, the anterior extremity of this conjoined mass is not acute, but barely rectangular, and the apical acute margin is a rather large acute tooth. The body is thinly clothed with long yellow hair, especially in front and behind. The antennal club is marked with three sutures, the first and second curved at the middle, bent forwards at the side, and the third nearly straight. Length 4 mm.; .11 inch.

One specimen, New Mexico and two from Oregon. I should consider these as badly developed specimens of *T. plastographus*, except for the differences in the antennal club.

7. **T. pini** Harris, Inj. Ins. ed. ult. p. 88, f. 43; Lec., Tr. Am. Ent. Soc. 1868, 163; *Bostrichus pini* Say, Journ. Acad. Nat. Sc. Phil. v, 257; ed. Lec. ii, 219; *T. præfrictus* Eichhoff, Berl. Ent. Zeitschr. 1867, 401.

The elytral striæ are composed of small, transverse punctures; the interspaces are wide and flat, and are marked with only a few punctures near the declivity; the latter is deep, strongly punctured, as in all the preceding species, with the sutural stria deeply impressed; the tooth at the end of the second interspace is small, but acute and distinct; that of the third is wanting; that of the fourth and fifth are acute, and connected by an elevated ridge, behind them there is one acute compressed tooth, which is scarcely less prominent, and this is followed after a narrow interval by the apical margin.

The first and second sutures of the antennal club are broadly curved at the middle, and bent forwards at the sides as in the preceding species, *T. rectus.* Length 4 mm.; .16 inch.

Northern and Western part of Atlantic district, extending to Canada and Hudson Bay Territory. Harris, who is good authority upon Say's species, indicates this as the one described by that author. It is destructive to Northern pine forests in the same manner, but, as far as observation yet goes, to a less extent than *T. cacographus* is in the South. I have therefore felt warranted in rejecting Dr. Zimmermann's determination of Say's species, and have applied a different name to the insect which has caused so great destruction to the pine forests of the Southern States.

8. **T. hudsonicus**, n. sp.

Specimens of a larger size (5 mm.; .19 in.), from Hudson Bay Territory have the elytral striæ composed of much larger punctures, than in *T. pini,* and the tooth of the fifth interspace has a tendency to become thicker and curved. I would be unwilling to designate it by a separate name, were it not that the sutures of the antennal club are not bent forward at the sides, but are nearly straight.

9. **T. interruptus** Lec., Tr. Am. Ent. Soc. 1868, 164; Eichhoff, Berl. Ent. Zeitschr. 1868, 274; *Bostrichus int.* Mann., Bull. Mosc. 1852, 357.

Alaska and Hudson Bay Territory. The teeth of the margin of the declivity are arranged as in *T. pini,* and *hudsonicus*; the stria are composed of still larger punctures than in the latter, and the punctures of the interspaces extend forward, almost to the base.

10. **T. tridens** Lec., Tr. Am. Ent. Soc. 1868, 164; Eichhoff, Berl. Ent. Zeitschr. 1868, 274; *Bostrichus tr.* Mann., Bull. Mosc. 1852, 357.

The scutellum is described by Eichhoff as smooth, but in my specimens it is as distinctly channeled as in the five specimens of *T. interruptus*; as in fact it is in all the preceding species except *T. calligraphus* and *marginatus*; this channel is less distinct in *T. plastographus* than in the others, but at best, is an illusive character of but little worth.

Alaska, one specimen. Very similar to *T. interruptus,* but the punctures of the elytral striæ are larger and more distant, and those of the interspaces nearly as large, though less numerous. The head is more finely granulate, strongly retuse in front, with a broad frontal groove. This character is probably sexual rather than specific.

11. **T. avulsus** Eichhoff, Berl. Ent. Zeitschr. 1867, 402; *Bostrichus av.* Zimm., Tr. Am. Ent. Soc. 1868, 147.

Southern States. A much smaller species (2.5 mm.; .10 inch); the elytral striæ are composed of close-set quadrate punctures; the interspaces are wide, and as far as the sixth have only a few punctures near the declivity; the latter is more abrupt than in the others, and nearly perpendicular, but deeply concave, and coarsely punctured, as usual, with the sutural stria deeply impressed; the tooth at the end of the second interspace is small, but well defined; that of the third is wanting; those of the fourth and fifth are united by a ridge, the angles of which are very little prominent; the apical ridge is long, and between it and the last mentioned tooth is an acute tooth which is equally prominent. The prothorax is nearly as long as the elytra, more finely and densely asperate in front, and more finely punctured behind. The sutures of the antennal club are nearly straight.

12. **T. latidens** Lec., Tr. Am. Ent. Soc. 1874, 72,

California, at Lake Tahoe; Mr. Crotch. This species is smaller (3 mm.; .14 inch), than *T. pini*, and of more slender form. It is easily distinguished from all the other species by the much more deeply concave declivity of the elytra; the cusp of the second interspace is acute; the teeth of the fourth and fifth are united together, forming a ridge which has three distinct cusps, of which the middle one is more prominent; the tooth between this ridge and the terminal margin is unusually prominent. The stria are composed of deep close-set punctures, and the interspaces are marked with rows of small punctures. The sutures of the antennal club are nearly straight.

13. **T. concinnus** Lec., Tr. Am. Ent. Soc. 1868, 164; *Bostrichus conc.* Mann., Mosc. 1852, 358.

Alaska, three specimens. Length 4.2 mm.; .17 inch. A very distinct species, with the elytra confusedly punctured; the declivity oblique, nearly flat, punctured, with the sutural stria scarcely distinct; the teeth are but three each side, of which the anterior one is small, and the third longer and larger than the second.

Group V. **Micracides.**

The funicle of the antennæ is 6-jointed, the outer joints broader; the club is pubescent and usually marked with sutures on both sides, as in the group *Corthyli*, but these sutures are usually very much curved, though sometimes nearly straight; the basal joint is long, and in one sex is fringed on the front margin with very long hairs; the eyes are transverse, coarsely granulated, either distant or contiguous beneath. The prothorax is produced over the head, rounded and asperate in front, and its anterior opening is very oblique as in most *Pityophthori*. The elytra are usually punctured in rows, convexly declivous behind, then concave near the tip, and sometimes asperate with small granules; the suture is produced into a sharp point, except in *T. fimbricornis*. The tibiæ are compressed, armed with a terminal hook, outer edge acute, not at all toothed (or but slightly so in *M. rudis*), and fringed with long hair; the front pair are as broad at base as at tip; the joints of the tarsi 1–3 are rather stout in all the species except *M. hirtella*, where they are longer and more slender, the fourth joint is small, and the fifth long, slender, with divergent simple claws. Although important structural differences are seen in the species, I regard them as constituting but two genera. This group is excellently defined by the 6-jointed funicle, and the broad parallel front tibiæ.

Club pubescent and annulated on both sides, outer joints of funicle slightly broader, not fringed; elytra aculeate at tip.................................... **MICRACIS.**

Club sparsely hairy, corneous, without sutures on upper surface; with two indistinct sutures on the lower surface; outer joints of funicle transversely produced, fringed with long hairs; elytra not aculeate. **THYSANOES.**

MICRACIS Lec.*

Sutures of club forming narrow curves................. 2.
" " " broad curves.................. 4.
" " " nearly straight................ 5.
2. Eyes distant beneath................................ 3.
Eyes contiguous beneath, elytra more finely punctured, clothed with very short stout hair.................. 3. **nanula.**
3. Elytra nearly glabrous................................ 1. **suturalis.**
" clothed with short stout hair.................... 2. **aculeata.**
4. Elytra nearly glabrous, with rows of coarse punctures, asperate near the tip.............................. 4. **rudis.**
5. Elytra sparsely clothed with long hair, punctured in rows, asperate behind............................. 5. **hirtella.**

1. **M. suturalis** Lec., Tr. Am. Ent. Soc., 1868, 165.

Illinois, boring in the branches of *Xanthoxylon*: Dr. Henry Shimer. The club of the antennæ is more than one-half longer than wide; the gular space between the eyes is wide; the punctures of the elytra are fine and arranged in numerous distinct rows; there are a few short hairs near the tip in some specimens, but in others even these are wanting. Length 2.5 mm.; 10 inch.

2. **M. aculeata** Lec., ibid. 1868, 165.

Virginia, one specimen. The antennal club is of the same form as in *M. suturalis*, and the eyes are as widely separated below; the elytra are clothed with short sub-erect yellowish hairs, which are slightly clavate; the punctures are larger and denser than in the preceding, and not arranged distinctly in rows, though owing to the manner in which the short bristles are placed the interspaces are feebly indicated. Length 2.7 mm.; .11 inch.

3. **M. nanula** n. sp.

Slender cylindrical, much smaller and narrower than the other species, brown; antennæ reddish-brown, with the first joint fringed with long hair; club but little longer than wide, sutures forming less narrow curves. Eyes contiguous beneath; prothorax one-half longer than wide, nearly opaque, sparsely and finely granulate behind, asperate with small acute distant tubercles in front; very thinly pubescent, with short erect hair, especially towards the sides. Elytra somewhat shining, feebly and indistinctly punctured, with numerous rows of short pale bristles; posterior declivity convex, sutural point small, less prominent than in the other species. Length 1.7 mm.; .07 inch.

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* I have in the synopsis incorrectly described the funicle as 5-jointed.

Haulover, Florida; February, Messrs. Hubbard and Schwarz. One specimen. The eyes are more coarsely granulated than in the other species, and there is no gular space between them.

4. **M. rudis**, n. sp.

Cylindrical, proportioned like *M. suturalis*, nearly black, rather shining, antennæ reddish-brown, sutures of the club forming broad curves; first joint with a tuft of hairs near the tip. Head very deeply excavated (almost as in *Xyloterus* ♂); eyes widely distant below. Prothorax somewhat longer than wide, broadly rounded in front, sides parallel behind; surface sparsely granulate behind, rough with numerous tubercles in front. Elytra scarcely pubescent, rugosely punctured; punctures large, arranged in approximate rows; interspaces rough with small acute tubercles on the declivity which is convex, except near the tip, which is concave; sutural point well developed. Length 2.5 mm.; .10 inch.

Detroit, Michigan; Messrs. Hubbard and Schwarz; one specimen. The tibiæ are feebly toothed on the outer edge.

5. **M. hirtellus**, n. sp.

Cylindrical, of the same form as *M. suturalis*, dark brown, thinly pubescent with fine yellowish sub-erect hair. Head flat, with a frontal tuft of hair; eyes widely separated beneath. Antennæ with the scape more densely fringed than usual; club small, rounded; sutures nearly straight. Prothorax longer than wide, nearly semicircular in front, densely but finely granulate behind; asperate with numerous sharp tubercles in front, disc feebly impressed, and more hairy each side of the median line behind the middle. Elytra rugosely punctured; punctures arranged in rows; declivity rough with small tubercles; convex, sutural point prominent. Length 2.7 mm.; .11 inch.

One specimen from Southern California, collected by Mr. Hardy and kindly given me by Dr. David Sharp. The tarsi are longer and more slender than in the other species.

THYSANOES n. g.

This genus is allied to *Micracis*; the front tibiæ are of the same parallel form, as wide at base as at tip, and not serrate on the outer edge; the antennæ are, however, quite different; the scape is fringed as in *Micracis*; the first joint of the funicle is longer than wide; thicker at the extremity; the remaining five joints are very distinctly separated, and become rapidly wider and transverse, by being prolonged at the upper side; they are also fringed with very long hair; the club is elliptical, compressed, rather shining, sparsely hairy, without distinct sensitive surface; without sutures on the inner face, with two indistinct sutures on the outer face, of which the lower one seems straight, and the distal one curved. The eyes are large, transverse, coarsely granulated, and not emarginate; they are separated beneath by a wide gular space. The first and second ventral segments are very large, the others short.

1. **T. fimbricornis**, n. sp.

Slender, cylindrical, yellowish brown. Head (♂) shining, flattened, with a small fovea on the vertex. Prothorax longer than wide, sparsely asperate in front and slightly hairy, then not densely punctured for a short distance, and nearly smooth behind the middle, and at the sides. Elytra with rows of small punctures; punctures of the interspaces smaller and more distant, and from them proceed short, clavate, pale bristles in regular rows; declivity convex, not at all impressed or retuse, sutural line very slight. The eyes are transverse, slightly emarginate and coarsely granulated. Front tibiæ broad from the base, sides parallel, outer edge acute, not serrate. Length 1.8 mm.; .075 inch.

Lancaster County, Pennsylvania. Abundant in twigs of hickory; easily recognized by the characters given above. The first and second ventral segments are each as long as the others united; third, fourth, and fifth short, equal, last dorsal slightly visible from beneath. The bristles are not striate as in *Hypothenemus*, but finely granulated.

Tribe II. SCOLYTINI.

The species of this tribe are easily known by the peculiar conformation of the ventral surface, which is, namely, flattened or concave, and obliquely ascending from the posterior end of the first segment to the fifth; the first and second segments are closely connate, and the other three are separated by straight sutures, about equal in length, and united are hardly longer than the oblique part of the second segment. The antennal club is pubescent on both sides, nearly solid and marked with indistinct but strongly curved, or rather angulated, sutures; the scape is short, the first joint of the funicle rounded, the remaining joints (five in number) closely united forming a pedicel to the club. The thighs are stout, the tibiæ rather broad and compressed; the front pair are not serrate on the outer edge, which is quite sharp; the outer apical angle is armed with a long curved hook, and the inner angle is nearly rectangular but not armed with a spine; the outer margins of the middle and hind tibiæ are feebly serrate, they are truncate at tip, and armed with two spines or spurs at the *outer* angle, and a much smaller spine at the inner angle; the tarsi are slender, as long as the tibiæ; the third joint is deeply bilobed, the fourth small, the fifth long, with simple divergent claws.

The side margin of the prothorax is distinctly defined, a very rare character in Rhynchophora, and the front coxæ are separated by the prosternum, which is very short in front of the coxæ. In some of the species the ventral segments of the ♂ are ornamented with spines, or acute tubercles such as have been already mentioned in *Proctorus* (p. 212) and *Platypus* (p. 343).

But one genus represents this tribe.

SCOLYTUS Oliv.

The name of this genus was first proposed by Geoffroy in 1762; but for reasons which I have given in detail elsewhere,* I prefer citing Olivier, 1789, for its first proper use in Zoology.†

Elytra with distinct striæ of close-set punctures.... **2.**
Elytra with numerous rows of punctures.......... **3.**
2. Striæ deep, interspaces narrow with single rows of fine punctures bearing short hairs; (abdomen of ♂ with several spines).............. 1. **quadrispinosus.**
Striæ less deep, interspaces wider, with single rows of fine punctures; (abdomen of both sexes without spines, coarsely punctured).... **2. fagi.**
Striæ hardly impressed, interspaces wide, with single rows of fine punctures; (abdomen ♂ with one spine at the middle near the base).. **3. unispinosus.**
Striæ hardly impressed, interspaces wide towards the suture with confused small punctures; (abdomen finely punctured, third and fourth ventral segments with very small tubercles at the hind margin)......................... **4. californicus.**
3. Elytra nearly glabrous......................... **4.**
Elytra clothed with long fine erect hairs........ **5. muticus.**
4. Abdomen sparsely punctured.................. **5.**
Abdomen densely punctured, anterior face of declivity large, perpendicular, margined....... **6. præceps.**
5. Punctures of elytra not larger towards the base.. **6.**
Punctures of elytra larger and somewhat scabrous towards the base......................... **7. subscaber.**
6. Second ventral segment not tuberculate.......... **8. sulcatus.**
Second ventral segment with a small apical tubercle................................. **9. ventralis.**

1. **S. quadrispinosus** Say, Journn. Ac. Nat. Sc. Phila. iii, 323, (♂); ed. Lec., ii, 182; Lec., Tr. Am. Ent. Soc. 1868, 165; *S. caryæ* Riley, Prairie Farmer, Febr. 1867; Walsh, Practical Entomologist, ii, 58; Lec., Tr. Am. Ent. Soc. (♀) 1868, 166; Riley, Noxious Ins. Missouri, (1873) v, 103, (♂, ♀); *S. muticus* ‡ Chapuis, (nec Say,) Mem. Soc. Roy. Sc. Liége, 1869.

♂. Head flat, longitudinally finely aciculate, fringed with long curled hairs; anterior part of ventral declivity very deeply concave; the margin is acute, subsinuate and more or less angulated at the middle; the concave face of the second segment is more or less carinate, and nearly smooth; the

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* On some changes in the nomenclature of North American Coloeoptera, which have been recently proposed. Canadian Entomologist, 1874, p. 185.

† The table of species in my memoir (Trans. Am. Ent. Soc. 1868, 165,) needs some modification on account of the discovery of additional species, and the sexual characters of some of those already described.

lateral angles are slightly produced into short spines; the next segment has three spines, which are sometimes very long, sometimes short; the fourth segment is concave, rounded and strongly margined behind, sparsely punctured, and has a more or less distinct tubercle at the middle of the hind margin; the fifth segment is very short, and retracted, visible only from behind.

♀. Head less flattened, punctured at the sides, aciculate only at the middle, thinly clothed with long hair; anterior face of ventral declivity flattened, margined, nearly perpendicular, sparsely punctured; remaining segments flat, strongly punctured; fifth rounded behind, as long as the third and fourth united.

New York, Georgia, Kansas, Missouri; for an excellent series bred from hickory trees, I am indebted to Mr. Riley. Length 4–5 mm.; .16 –.20 inch.

2. **S. fagi** Walsh, Practical Entomologist, ii, 58, (♂, ♀); Lec., Tr. Am. Ent. Soc. 1868, 166.

♂. Head flattened, punctured, densely clothed with long erect hairs; ventral surface strongly punctured, more sparsely in front; declivity margined, nearly perpendicular; fifth segment as long as the third and fourth longitudinally impressed.

♀. Head more convex, less hairy; the ventral segments more strongly punctured.

Illinois, one pair. Length 5.5 mm.; .22 inch. Depredates upon beech trees, according to Mr. Walsh.

3. **S. unispinosus**, n. sp.

Cylindrical, shining black, head aciculate, thinly clothed with long erect hairs. Prothorax a little longer than wide, sides rounded and feebly constricted in front, finely and not densely punctured. Elytra with feebly impressed striæ composed of small punctures; interspaces with single rows of much smaller punctures. Ventral declivity feebly punctured; anterior edge somewhat prominent, but obtuse at the middle; a long obtuse spine projects from the middle of the nearly perpendicular face; fifth segment hardly longer than the fourth, concave, rounded and strongly margined behind. Length 2.3–2.7 mm.; .09–.12 inch.

Two specimens, Oregon. The head is more flattened in one than in the other, but I observe no other indication of sexual difference. The antennæ are ferruginous, and the tarsi brown, as in the other species of the genus.

4. **S. californicus** Lec., Tr. Am. Ent. Soc. 1868, 166.

One ♂, California; Mr. A. Murray. Length 4.5 mm.; .18 inch.

5. **S. muticus** Say, Journ. Ac. Nat. Sc. Phila. iii, 323; ed. Lec., ii, 182; Lec., Tr. Am. Ent. Soc. 1868, 166.

Pennsylvania, one ♂. Easily known by the elytra with numerous rows of strong, but distant punctures, which bear long, erect, soft hairs. Head flat, finely aciculate, sparsely fringed with long hair. Ventral surface sparsely punctured; declivity oblique, margined; fifth segment triangularly impressed and densely fringed with long hair behind. Length 3.8 mm.; .15 inch.

6. **S. præceps**, n. sp.

Cylindrical, black, shining, head thinly clothed with long erect hair, prothorax scarcely longer than wide, sides rounded in front and feebly constricted; surface deeply but finely and distantly punctured. Elytra with numerous rows of rather distant punctures, and showing some traces of very fine striæ; ventral surface strongly punctured in front, densely and finely behind; declivity large, perpendicular, acutely marginate; second ventral segment faintly carinate near the tip; fifth ventral concave, strongly margined, as long as the third and fourth united. Length 3 mm.; .12 inch.

California, Calaveras; Mr. Crotch. The head of the ♂ is more flattened, more distinctly aciculate and less punctate than in the ♀, and is also more hairy. Otherwise I observe no sexual differences.

7. **S. subscaber**, n. sp.

Cylindrical, black, shining, head thinly clothed with erect hairs, finely aciculate behind, punctulate in front. Prothorax a little longer than wide, sides feebly narrowed, and slightly constricted in front; apical margin and sides distinctly punctured, disc behind obsoletely punctulate. Elytra with the suture more deeply concave towards the base than usual; marked with faint traces of striæ, and rows of punctures which are very small behind, but become larger and elevated into granules near the base; the apical margin is concave, and densely, rugosely punctured as usual, and very feebly serrate. Ventral declivity flat, oblique, scarcely concave, feebly punctured, anterior margin fine, not prominent; fifth segment longer than the third and fourth united, slightly concave; posterior margin acutely prominent. Length 4.2 mm.; .17 inch.

Vancouver Island, Oregon and California; three specimens without sexual differences.

8. **S. sulcatus** Lec., Tr. Am. Ent. Soc. 1868, 167.

One specimen, New York. The rows of punctures are alternately very slightly larger, so that in certain lights there are feeble indications of striæ, but they are not coarser near the base. Length 3.7 mm.; .15 inch.

9. **S. ventralis** Lec., ibid. 1868, 167.

Washington Territory, George Gibbs. Similar in sculpture to *S. sulcatus*, but the ventral declivity is larger, the second segment is armed behind with an acute compressed tubercle, and the third and fourth segments are more flattened, and less sparsely punctured; the fifth segment is as long as the two preceding united, concave, with reflexed posterior margin. Length 4 mm.; .16 inch.

Tribe III. HYLURGINI.

In this tribe the head is exposed, not covered by a prolongation of the prothorax; the latter is truncate in front or but slightly rounded, and not differently sculptured. The antennæ vary in form according to the group, and in *Hylastes* assume very much the same form as in *Cossonidæ*, to which some of these insects bear a strong resemblance. They may be distinguished, however, by the compressed and serrate or spinulose tibiæ.

The third joint of the tarsi is frequently dilated and bilobed, and the fourth joint, less conspicuous than in the preceding tribes, is sometimes quite indistinct. The first and second ventral segments are always separated by a well-defined straight suture, more deeply impressed than in *Tomicini.*

The prothorax is bisinuate behind, with a well defined antescutellar angle in some of the species of all the groups except *Hylastes.* They thus manifest a tendency to the *Anthribidæ* (*Choragus,* &c.), as *Hylastes* does towards the *Cossonidæ.*

In several genera the front coxæ are separated by the prosternum, and in *Dendroctonus* and the allied European genera *Hylurgus* and *Blastophagus* the second and third ventral sutures are curved backwards at the sides. In *Hylastes* the prosternum is deeply excavated for the reception of the short beak. In all these characters resemblances are seen to different tribes of *Curculionidæ.*

Our genera indicate the following groups:

Club oval, annulated, scarcely compressed.................. 2.
" strongly compressed, not annulated, pubescent on both sides ....**Polygraphi.**
2. Joints of club separated.................................**Phlœotribi.**
" " closely connate, as usual.................. 3.
3. First and fifth ventral segments elongated, scutellum not depressed .... 4.
Ventral segments nearly equal and scutellum depressed.... **Hylurgi.**
4. Prosternum very short, funicle with few joints........... **Crypturgi.**
Prosternum excavated; funicle 7-jointed................. **Hylastes.**

Group I. **Polygraphi.**

This group is sufficiently defined by the club of the antennæ being large, strongly compressed, pubescent and sensitive, and without sutures on both sides, and by the antennæ being inserted as usual at the sides of the front. The tibiæ are broadly dilated, obliquely rounded at the apex, and finely serrate; the third joint of the tarsi is not bilobed, and the fourth, though small, is distinct. The basal margin of the elytra is acute and serrate.

Two genera occur in our fauna:

Eyes slightly emarginate, funicle attached at the side of the club, outer joints slender......... CHRAMESUS.
Eyes completely divided, funicle attached at the end of the club, outer joints gradually stouter POLYGRAPHUS.

CHRAMESUS Lec.

Rhopalopleurus Chap.

Body stout, oval, convex, clothed with small scales and stout, erect bristles, which are not striate as in *Hypothenemus hispidulus* (p. 355).

Head but slightly prolonged in front of the eyes, which are large transverse, rather finely granulated, slightly emarginate at the insertion of the antennæ. Antennæ inserted at the sides, scape long, slender, curved, funicle 5-jointed, first joint stouter, a little longer than wide; 2–5 slender, closely united, attached to the side of the club, which is very large and strongly compressed, pubescent on both sides, not marked with sutures; the lower edge is nearly straight, the upper is curved and sinuate, and each end is obtusely rounded. Ventral surface moderately convex, sutures straight, well impressed, first and second segments a little longer. Tibiæ dilated, finely serrate on the outer side and at the tip, which is broadly rounded; apical spine at the inner angle short; tarsi with joints 1–3 short, fourth small, but distinct; fifth as long as the others united, with large simple divergent claws.

Bristles long, scales of elytra sparse...................... **1. icoriæ.**
Bristles short, scales dense................................ **2. Chapuisii.**

1. **C. icoriæ** Lec., Tr. Am. Ent. Soc. 1868, 168; *Rhopalopleurus Lecontei* Chapuis, Mem. Soc. Roy. Sc. Liége, 1869.

♂. Head deeply concave.

♀. Head flattened, with a feeble curved impression.

Middle and Western States, in hickory twigs. The present is an excellent example of the uncertainty of entomological descriptions. In the memoir above cited, I described the funicle as having but one distinct joint, "the remaining joints are obsolete, and visible only as a corneous ridge on the upper edge of the base of the club," which, in fact, was the appearance presented by all the specimens in my cabinet. But on receiving the memoir of my friend, Dr. Chapuis, suspecting that I might have made an error by neglecting to observe the antennæ in all directions, I relaxed some specimens, and was greatly pleased to find that the very extraordinary character upon which he had founded *Rhopalopleurus* really existed in my species. The other characters given in my detailed description above cited are, however, so characteristic, that the genus might have been recognized, without reference to the antennal funicle; a part of the body, which, as I have said above, I believe to be of but little value in the classification of these insects. Length 1.5 mm.; .06 inch.

2. **C. Chapuisii** n. sp.

Oval, robust, convex, black, with the antennæ testaceous, precisely as in *C. icoriæ*, and differing from it only by the interspaces of the elytra being densely clothed with small thick scales, and single rows of rather short bristles, and by the striæ being narrower and finely crenulate, instead of coarsely punctured. Length 1.5 mm.; .06 inch.

One ♂ Louisiana. The front is triangularly flattened and marked with a fine curved line, at the middle of which is a small transverse fovea.

POLYGRAPHUS Er.

In this genus the body is less robust, and of the usual cylindrical form, narrowed in front, and rounded behind, as seen in *Hylesinus*. The eyes are divided, and the parts connected by a smooth corneous line. The scape of the antennæ is long and strongly clavate; the funicle is 5-jointed, the first joint stout, as long as the others united; 2–5 gradually increasing in thickness, short, closely united, forming a conical mass, to which the club is attached at the upper extremity of its base; the latter is strongly compressed, pubescent, and without sutures on both sides; oval-pointed, with the lower side less curved than the upper, and broader at the base than towards the tip, so as to be slightly securiform. The elytra are rugosely punctulate, scarcely striate, clothed with small stout scales, and with rows of scarcely longer erect bristles. The ventral segments are nearly equal, but the first and fifth are a little longer. The tibiæ are moderately dilated with three or four small teeth near the tip, which is obliquely truncate; the inner angle is slightly mucronate; the tarsi are slender, the third joint not emarginate, the fourth small but distinct, and the fifth as long as the others united, with divergent simple claws.

1. **P. rufipennis** Lec., Tr. Am. Ent. Soc 1868, 169; *Apate* (*Lepisomus*) *rufipennis* Kirby, Fauna Bor. Am. iv, 193, tab. 9, fig 2; *A.* (*L.*) *nigriceps* Kirby, ibid, 194, (immature); *P. saginatus* Mann., Bull. Mosc. 1853, 237; *Hylesinus rufipennis* Mann., ibid. 1853, 237.

New Hampshire to Alaska, also in Georgia. The surface of the elytra is slightly asperate near the base, which is very acutely margined; the rows of punctures which represent the striæ are less indistinct in some specimens than in others. The male has the front slightly impressed, with a small frontal tubercle sometimes divided into two. Length 2-2.5 mm.; .08–.10 inch.

In some specimens a few separate lenses are scattered along the line between the two parts into which the eyes are divided; in others these are entirely absent.

Apate (*Lepisomus*) *brevicornis* Kirby, loc. cit. 194, may belong to this genus, and would differ by the shorter antennæ with smaller club. The type is unfortunately in bad condition, and quite irrecognizable.

Group II. **Phlœotribi.**

This group is intermediate between the preceding and the following, and differs from both by the antennal club being composed of three separate joints, which in *Phlœotribus* form a lamellate mass, and in the European genus *Phlœophthorus* a loosely articulate club as in many Clavicornia. Dr. Chapuis describes the antennæ as frontal; but I see no special difference in their position from that observed in the preceding and following groups. The head is but very little prolonged in front of the eyes, and there is no preocular groove for the reception of the scape of the antennæ such as is observed in the two following groups. The tibiæ are dilated, compressed, obliquely rounded and serrate at tip, with the inner angle slightly mucronate; the tarsi have the joints 1–3 short, gradually a little wider; third not emarginate; fourth very small; fifth as long as the others united, with divergent simple claws. The basal margin of the elytra is acute and serrate.

But one genus is represented in our fauna:

PHLŒOTRIBUS Latr.

The eyes are transverse, oblique, and not emarginate. Two species are known to me; both clothed with stiff pubescence.

A. Lamellate joints of club very long; tibiæ finely serrate.

Elytra with striæ of large punctures, interspaces nearly flat, rugosely punctulate, sides and apex feebly serrate, prothorax finely punctulate.................... 1. **liminaris.**

B. Lamellate joints of club short, not more than twice as wide as long; tibiæ coarsely serrate.

Elytra with striæ of large punctures, interspaces narrow, serrate with single rows of small acute granules, sides and apex strongly serrate; prothorax finely not densely granulato-punctate.................................... 2. **frontalis.**

1. P. **liminaris** Lec., Tr. Am. Ent. Soc. 1868, 148; *Tomicus liminaris* Harris, Inj. Ins. ed. ult. 88.

Middle States, depredating on peach trees, and according to Miss Margaretta Morris (Downing's Horticulturalist, iv, 502), producing the disease called the yellows. Length 2.2 mm.; .85 inch.

2. P. **frontalis** Zimm., Tr. Am. Ent. Soc. 1868, 148; *Bostrichus fr.* Fabr., Syst. El. ii, 389; *Scolytus fr.* Oliv., Ins. No. 78, 13, Pl. 2. f. 20; *Phlœophthorus granicollis* Eichhoff, Berl. Ent. Zeitschr. 1868, 149; *Phlœotribus gr.* Chapuis, Mem. Soc. Roy. Sc. Liége.

♂. Head broadly concave, armed with a small erect acute spine each side above the insertion of the antennæ; the spines vary in length, according to the individual.

♀. Head nearly flat, with a faint crescentic impression.

District of Columbia, Georgia, Iowa; found in Missouri by Mr. Riley, depredating on mulberry. I have mentioned *Phlœotribus setulosus* and *dubius* Eichhoff, (Berl. Ent. Zeitschr. 1868, 149), as synonyms of this species; but from the memoir of Dr. Chapuis, above cited, I learn that these are really South American species. The locality given by Mr. Eichhoff is therefore incorrect, and his descriptions are so indefinite as to render my error quite excusable.

This species is of the same size and form as the preceding, but is readily recognized by the differences in the antennal club and in the sculpture of the prothorax and elytra.

Group III. **Hylurgi.**

In this group the form varies from oval to cylindrical; the antennæ are inserted at the sides of the front, immediately before the eyes, which are large, transverse, slightly or not at all emarginate, and finely granulated. The scape of the antennæ is long, and is received in a narrow, transverse groove in front of the eyes; this groove becomes more developed in the next group, but is not apparent in the preceding groups or tribes; the mandibles are stronger, nearly flat above, and the labrum is obsolete; these characters indicate a recurrence towards the normal Rhynchophora. The funicle of the antennæ is 5–7-jointed; the first joint stout, the others slender, closely united; the club is very slightly compressed, annulated and pubescent, oval-pointed in *Hylesinus*, circular, compressed, nearly glabrous, with transverse sutures in *Dendroctonus*. The ventral segments are convex, nearly equal; the first and fifth somewhat longer, the sutures deep and straight. The tibiæ are dilated, and strongly toothed except in *Cnesimus*, where they are not serrate; the third joint of the tarsi is usually bilobed, and the fourth very small; the fifth long with divergent simple claws.

The basal margin of the elytra is elevated and acute as in the two preceding groups, and the prothorax is narrowed from the base forwards.

Funicle 7-jointed.............................. 2.
" 6-jointed.............................. BLASTOPHAGUS.
" 5-jointed.............................. 4.
2. Tibiæ with few teeth; prothorax strigose longitudinally, anterior coxæ widely separated; club elongate-oval, compressed.......... CNESINUS.
Tibiæ serrate; club elongate-oval, pointed, not compressed.............................. HYLESINUS.
3. Club oval, obtusely pointed; first joint of tarsi not shorter; outer joints of funicle much broader. .... PHLŒOSINUS.
Outer joints of funicle scarcely broader........ CHÆTOPHLŒUS.
Club oval-elongate; first joint of tarsi short.... CARPHOBORUS.
" circular, compressed; first joint of tarsi not shorter.............................. DENDROCTONUS.

CNESINUS Lec.

Nemophilus Chapuis.

I have already sufficiently described this remarkable genus, which is at once known by the widely separated front coxæ, and the longitudinally aciculate prothorax. Dr. Chapuis is in error in describing the tibiæ as "extus integerrimæ;" the front tibiæ have three acute teeth directed backwards, of which the third is apical, and the others near the apex; the outer apical angle of the middle tibiæ is produced, and emarginate at tip. The third joint of the tarsi is visible but not conspicuously emarginate; the joints 1–3 are rather stout, nearly equal, and the fifth is shorter than the others united.

1. **C. strigicollis** Lec., Tr. Am. Ent Soc. 1868, 171; *Nemophilus strigillatus* Chapuis, Mem. Soc. Roy. Sc. Liége, 1869, 27.

Illinois and South Carolina; also in Texas, according to Chapuis. Length 3 mm.; .11 inch.

HYLESINUS Fabr.

This genus represents the first division of my memoir, above cited, and contains those species in which the funicle is composed of seven distinct joints, which united are nearly or quite as long as the club. The tibiæ are finely serrate at and near the tip; the joints 1–3 of the tarsi are rather broad and equal, the third bilobed; the fifth about equal to the others united, and clavate, with simple, divergent claws.

With one exception, the species are densely clothed with flat scales, and variegated in color with pale and dark gray tints.

Body oval, clothed with pale and dark scales, without intermixed hairs	2.
Body elongate	4.
2. Club of antennæ elongate-fusiform, bands of elytra oblique	3.
Club of antennæ oval, body stouter, bands of elytra transverse	**3. fasciatus.**
3. Sides of prothorax muricate before the middle	**1. imperialis.**
" " not muricate	**2. aculeatus.**
4. Clothed with scales, with rows of bristles on the elytra	**4. sericeus.**
Clothed with short, erect yellow hair, without scales	**5. opaculus.**
Thinly and finely pubescent; prothorax muricate at the sides	**6. aspericollis.**

1. **H. imperialis** Eichhoff, Berl. Ent. Zeitschr. 1868, 149; Lec., Tr. Am. Ent. Soc. 1868, 169; *H. aculeatus* ‡ Chapuis, l. c. 32.

Dakota and Arizona. Resembles the next species, but is easily known by the muricate punctures of the sides of the prothorax; the basal edge of the elytra is also more strongly serrate. There is no such difference in the depth or punctuation of the elytral striæ as to warrant the differential phrases used by Dr. Chapuis. It is found also in Wisconsin and Georgia, according to Eichhoff, and seems to me to be barely distinct from the following species.

2. **H. aculeatus** Say, Journ. Ac. Nat. Sc. Phil. iii, 322; ed. Lec., ii, 181; Zimm., Tr. Am. Ent. Soc. 1868, 149; *H. pruinosus* Eichhoff, Berl. Ent. Zeitschr. 1868, 149; Chapuis, Mem. Soc. Roy. Sc. Liege, 1869, 32.

Massachusetts to Texas, Kansas and Oregon; depredates on *Fraxinus*. So far as the distinctions exist between this and the preceding, they are well exhibited in the descriptions of Eichhoff; to whom, however, the descriptions of Say seem to have been unknown. It has happened unfortunately that Dr. Chapuis has applied Say's name to the less known form called *imperialis* by Eichhoff, and retained *pruinosus* for the present well-known and widely diffused form.

The Munich Catalogue has added to the confusion by citing Say's description under the genus *Dendrosinus* (2673), and placing *H. globosus* Eichhoff, as a synonym. The latter is probably a South American species, described by Eichhoff, with an incorrect locality, since a variety of it is mentioned by Chapuis (p. 28) as occurring in Columbia. Length 2.2–3.4mm.; .09–.13 inch.

In the ♂ the head is more flattened than in the ♀; and occasionally has a very narrow smooth longitudinal line. The specific name is badly chosen, as it is only in partially abraded specimens that the muricate punctures of the interspaces of the elytra can be seen.

3. **H. fasciatus** Lec., Tr. Am. Ent. Soc. 1868, 170.

One specimen, York county, Pa. A small species of stouter oval form, with the club of the antennæ thicker, less elongate, and corneous and shining at the base. Length 1.5 mm.; .06 inch.

4. **H. sericeus** Mann., Bull. Mosc. 1852, 385; *Hylurgus ser.* Mann., ibid, 1843, 296; ibid, 1852, 356.

Var. *H. nebulosus* Lec., Proc. Ac. Nat. Sc. Phil. 1859, 285.

Alaska to California. Length 3 mm.; .12 inch. The outer interspaces of the elytra are marked with a row of small acute tubercles. The bristles of the elytra are longer in the type than in the variety, and the sides of the prothorax seem a little more rounded, but otherwise there is no special difference. The elytra are not banded as in the preceding species, but confusedly tesselated. I observe no sexual characters, and the front is finely carinate in the four specimens examined. The head is more prolonged than in the other species. The club of the antennæ is subovate pointed, about twice as long as wide, annulated with straight sutures.

5. **H. opaculus** Lec., Tr. Am Ent. Soc. 1868, 170; *Phlœosinus* ‡ *liminaris* ‡ Chapuis, Mem. Soc. Roy. Sc. Liége, 1869, 39.

Middle States. This species has a deceptive resemblance to *Phlœotribus frontalis*, and it is only by examining the antennæ that it may with certainty be separated. The reference to the genus *Phlœosinus* is incorrect, as the outer part of the funicle is divided into six joints by five transverse sutures, precisely as in the other species of *Hylesinus*. The club is subovate, obtusely pointed, with straight sutures, and the basal part is more shining and less pubescent than usual. Length 2–2.5 mm.; .08–.10 inch.

6. **H. aspericollis** n. sp.

Cylindrical, rather elongate, blackish-brown, thinly clothed with fine short pubescence. Head sparsely punctured, with a faint frontal impression, and an indistinct smooth median line. Prothorax at base scarcely wider than long, slightly rounded on the sides, gradually narrowed in front, but not constricted, nearly truncate at base and apex, finely and densely punctured, sparsely but strongly asperate, with acute tubercles at the sides. Elytra with punctured striæ, interspaces moderately convex, granulato-rugose, and muricate with acute small spines becoming more prominent on the declivity. Antennæ ferruginous, with seven distinct joints in the funicle; club oval-pointed, transversely annulated as usual; front tibiæ rather suddenly dilated at the tip. Length 2.5–3.4 mm.; .10–.13 inch.

California, (at Santa Barbara?); Mr. Crotch; several specimens, in which I observe no special sexual differences, except that in some the frontal impression is a little deeper. It is similar in form to *H. opaculus* but larger, with the pubescence much finer and inconspicuous.

PHLÆOSINUS Eichhoff.

In this genus the funicle of the antennæ is much shorter than the club, the first joint is rounded, the remaining four joints are closely united and gradually become broader; the club is large, oval, compressed, obtusely rounded, and divided by straight well-marked sutures. The front coxæ are moderately distant. The tibiæ are acutely serrate; the tarsi have the joints 1–3 equal, the third bilobed; the fifth is nearly equal to the others united. I have erroneously mentioned the funicle of the antennæ of these species as 6-jointed, in the memoir cited below.

Pubescence fine, sparse, declivity of elytra with first and third interspaces more elevated, and more strongly tuberculate..............................	1. **serratus.**
Pubescence fine, sparse, declivity of elytra with third interspace elevated behind.........................	2. **cristatus.**
Pubescence fine, less sparse, declivity of elytra more finely tuberculate, or serrate, nearly equal in convexity...	3. **dentatus.**
Pubescence fine, less sparse, striæ of elytra strongly punctured, second interspace depressed on the declivity, the others serrate with acute tubercles, nearly equal in convexity.......................	4. **punctatus.**

1. **P. serratus** Lec., Tr. Am. Ent. Soc. 1868, 170.

New York, one specimen. This species is cited in the Munich Catalogue as undescribed. The diagnosis given on page 169 of my memoir, and the explanatory remarks under the next species contain all the information necessary to distinguish it from the common and well known *P. dentatus.* Any lengthy description would be unnecessary, as it only differs by larger size, and by the first and third interspaces being strongly elevated and serrate behind. The pubescence is shorter, and seems less dense than in *P. dentatus*, but this may be produced by abrasion. Length 3.5 mm.; .14 inch.

The striæ are distinctly punctured; the interspaces wide, densely and strongly granulate and rugose. The front is very slightly carinate.

2. **P. cristatus** Lec., Tr. Am. Ent. Soc. 1868, 170.

California; cabinet of Mr. Ulke. I have no specimen of this species, and can only say that it differs from the preceding by the larger size (4 mm.; .16 inch); and by the sutural interspace being less elevated than the third, though also serrate.

3. **P. dentatus.** *Hylurgus dent.* Say, Journ. Acad. Nat. Sc. Phil. v, 258; ed. Lec., ii, 319.

Middle and Eastern States and Canada; depredates on *Juniperus.* Smaller than the two preceding, with the declivity of the elytra more abrupt and flattened, and less convex; the striæ are impressed and scarcely punctured, the interspaces are wide, densely and strongly granulate and rugose; the rugosities becoming acute tubercles on the declivity of the alternate interspaces; second interspace not depressed on the declivity, and furnished with a row of smaller tubercles in some specimens, but not in others. This difference is probably sexual. The head is granulato-punctate, and the front is not carinate.

4. **P. punctatus**, n. sp.

This species precisely resembles *P. dentatus* in form, size and sculpture, except that the striæ of the elytra are wider, and strongly punctured; the interspaces narrower, less densely granulated and rugose, and the second interspace on the declivity is depressed, shining, sparsely punctured, and narrower than the adjacent interspaces. The front is finely but distinctly carinate. Length 2 mm.; .08 inch.

Oregon and Lake Superior.

P. Haagii Chapuis, Mem. Soc. Roy. Sc. Liege, 1869, 38; *Dendroctonus Haagii* Eichhoff, Berl. Ent. Zeitschr. 1868, 148, may be synonymous with this species, but I do not observe in the four specimens in my collection any trace of the smooth dorsal line extending from the base beyond the middle, as mentioned in Chapuis' description. Neither is the locality given, "Amer. bor.," of much service in identifying the species in a genus where the forms are so closely similar.

P. grániger Chapuis, l. c. 39, I am also unwilling to attach as a synonym to any of the species above described; being from Texas it is quite likely to be different. The descriptions of both these species will be found in the appendix.

CHÆTOPHLŒUS n. g.

This genus is founded upon *Hylesinus hystrix*, a singular species from California, of robust oval form, thickly clothed with coarse, erect hair. It differs from *Phlœosinus* by the four joints which constitute the outer part of the funicle of the antennæ being slender, and increasing much less rapidly in thickness; the club is equally large, subovate, compressed, obtusely rounded at tip, and the sutures are also straight. The mouth is clothed with long, coarse hair. The prosternum is very short in front of the coxæ, which are very narrowly separated. The first ventral segment is longer than the second, and the third, fourth and fifth are short. The tibiæ are broadly dilated, rounded and finely serrate at tip; the tarsi are not plainly visible in the unique specimen in my collection, but the third joint is emarginate, rather than bilobed.

1. **C. hystrix** Lec., Pr. Ac. Nat. Sc. Phil. 1858, 81; Tr. Am. Ent. Soc. 1868, 171 (*Hylesinus*).

San Diego, one specimen. The head is broadly concave, with a smooth medial line. The prothorax is strongly and densely punctured. The elytral striæ are not impressed, and are composed of approximate punctures; the interspaces are flat, punctured; the declivity is rounded, the part near the suture is deeply and broadly concave, and the outer side of the concavity, corresponding to about the fourth interspace, is armed with four or five tubercles; the sutural interspace on the declivity is narrow, slightly elevated, and marked with a row of very small granules. Length 2.2 mm.; .09 inch.

CARPHOBORUS Eichhoff.

This genus contains species of small size and elongate form; dull, densely punctured surface, clothed with very small yellowish scales. The elytra are striate with large, approximate punctures; the second interspace is narrowed and abbreviated on the declivity, and the third is elevated into a high, spinulose crest, which unites with the apical margin; this margin is similarly thickened and elevated, though to a less extent. The funicle of the antennæ is 5-jointed; first joint larger and rounded, the others closely united, forming a short, conical mass, as in *Phlœosinus*; club large, slightly pubescent, moderately compressed; rounded, obtuse at tip, and divided by two straight sutures; the first joint of the club is more shining than the others. Prosternum very short in front of the coxæ, which are large, prominent and contiguous. The tibiæ are moderately dilated, the front ones have two acute teeth near the tip, on the outer side, and a long, terminal hook at the inner angle; the other tibiæ are obliquely rounded at tip and finely serrate; the first joint of the tarsi is shorter than the second; the third is equal to the second, not bilobed; the fifth is as long as the others united. The mouth is clothed with long, coarse hair as in *Chætophlœus*.

	First and third interspaces of the elytra elevated on the declivity and serrate........................	2.
	First and third interspaces scarcely elevated, not serrate..	1. **simplex.**
2.	First and third moderately elevated; second not much narrowed on the declivity......................	2. **bifurcus.**
	First and third strongly elevated; second much narrower on the declivity........................	3. **bicristatus.**

1. C. **simplex** n. sp.

Elongate-cylindrical, blackish-brown, somewhat shining. Head finely and densely granulato-punctate in front, nearly smooth behind. Prothorax twice as wide as long, broadly rounded on the sides, narrowed and feebly constricted in front, which is nearly truncate; base slightly bisinuate; finely punctured, with a faint indication of a smooth dorsal line; scarcely perceptibly pubescent. Elytra with striæ of quadrate punctures, interspaces finely roughened, thinly clothed with very small scales, second interspace depressed and narrowed on the declivity, first and third slightly elevated, not serrate. Length 2.2 mm.; .085 inch.

♂. Head with a round excavation fringed with long yellow hairs.

♀. Head slightly impressed, not hairy.

Mojave Desert, California; Mr. Crotch. The fifth joint of the funicle is broader and almost part of the club; the third joint of the tarsi is not wider than the second, just as in the other species.

2. C. **bifurcus** Eichhoff, Berl. Ent. Zeitschr. 1868, 147; *Dendroctonus bif.* Zimm., Tr. Am. Ent. Soc. 1868, 148; Chapuis, Mem. Soc. Roy. Sc. Liége, 1869, 97.

♂. Front with two small approximate tubercles.

♀. Front uniformly convex.

District of Columbia; Ulke. This species differs from the next by the third interspace of the elytra being less elevated on the declivity, and the second less evidently narrowed. The punctures of the elytral striæ are also larger. A greater number of specimens will probably show that these differences are not of specific value. Length 1.5 mm.; .06 inch.

3. **C. bicristatus** Chapuis, loc. cit. 97.
Georgia, two females; under pine bark. Length 1.8 mm.; .07 inch.

DENDROCTONUS Er.

The body is stout cylindrical, narrowed in front, punctured and hairy; the funicle is 5-jointed, the first joint rounded, but not large; the other joints gradually increasing in breadth; club rounded, strongly compressed, scarcely pubescent, divided by three transverse straight sutures. Prothorax slightly emarginate in front, bisinuate at base. Prosternum not very short in front of the coxæ, broadly concave, with traces of a ridge each side, as in *Phlœosinus* and *Blastophagus;* front coxæ contiguous. Tibiæ moderately dilated, with a few large lateral and apical teeth; terminal spine stout and straight; tarsi with joints 1–3 slightly decreasing in length; third wider, deeply bilobed, fourth small, distinct; fifth as long as the others united. Ventral segments nearly equal in length; the first suture is straight, the others strongly curved backwards at the side.

The species depredate upon pine trees, and are closely allied and difficult to distinguish; the dorsal line of the prothorax varies in individuals of the same species; I cannot change the table I have given in the memoir cited below except by adding one new species.

	Prothorax narrowed in front, slightly bisinuate at base	2.
	" very slightly narrowed in front, strongly bisinuate at base; head large....................	**7. frontalis.**
2.	Interspaces rough both on the disc and on the declivity..	3.
	Interspaces rough towards the base, but only punctured on the declivity..........................	4.
3.	Prothorax very densely coarsely punctured; hairs of elytra not very long..........................	**1. terebrans.**
	Prothorax less densely punctured; hairs of elytra long..	**2. similis.**
4.	Prothorax punctured with smaller punctures intermixed, hairs of elytra long.....................	**3. rufipennis.**
	Prothorax equably punctured, occiput finely punctured, hairs of elytra long......................	**4. punctatus.**
	Prothorax equably punctured, occiput sparsely punctured, hairs of elytra long; smaller, with broader prothorax..	**5. simplex.**
	Prothorax finely sparsely punctured; elytra opaque, densely, finely granulated and punctulate, pubescence very short..............................	**6. brevicomis.**

1. **D. terebrans** Lac., Gen. Col. vii, 361; Zimm., Tr. Am. Ent. Soc. 1868, 149; *Scolytus ter.* Oliv., Ent. 78, p. 6; pl. 1. f. 6; *D. valens* Lec., Pacific R. R. Expl. and Surveys, Ins. 59; Chapuis, Mem., Soc. Roy. Liége, 1869, 91.

Canada, Georgia, Oregon, California. The specimens from the Pacific slope are larger, and the punctures of the prothorax are rather smaller and more dense, but these differences do not seem to me worthy of specific distinction. Some specimens from New Hampshire and Canada have the prothorax more sparsely punctured, almost as in the next species, from which they are only distinguished by the shorter hairs of the elytra. Length 5.2–8 mm; .2–.32 inch.

2. **D. similis** Lec., Pac. R. R. Expl. and Surveys, Ins. 59.

Oregon; five specimens. I have incorrectly cited this species as a synonym of *D. obesus*, from which it differs in having the asperities of the elytra continue on the declivity. The tibiæ are armed, as in the preceding, with three acute teeth on the outer side near the tip, but the prothorax is less densely punctured, and the elytral hairs are longer; the back part of the head is less densely punctured. Length 4.5–6.5 mm.; .18–.25 inch.

A smaller and somewhat more elongate form occurs in Canada, Texas and Colorado, but I do not think it capable of being separated as a distinct species. Length 4.2 mm.; .165 inch.

3. **D. rufipennis** Kirby, Fauna Bor. Am. iv, 195, (*Hylurgus*); Mann., Bull. Mosc. 1853, 238; *Hylurgus obesus* Mann., ibid. 1843, 296; ibid. 1852, 356.

Alaska, Canada, Anticosti. I can perceive no difference between the specimens sent me under the names cited above. It is only to be distinguished from the preceding by the declivity of the elytra smoother and, more shining, and almost without asperities; and by a slight difference in the punctures of the prothorax, which are of unequal size. The dorsal line of the prothorax is sometimes narrow and elevated, sometimes obsolete. Length 6 mm.; .24 inch.

4. **D. punctatus** Lec., Tr. Am. Ent. Soc. 1868, 193.

New York; three specimens. Very similar to the preceding, but the back part of the head is nearly smooth, or feebly punctulate; the punctures of the prothorax are larger and less dense, and the declivity of the elytra less shining, and very slightly asperate. Length 6 mm.; .25 inch.

5. **D. simplex** Lec., Tr. Am. Ent. Soc. 1868, 173.

Canada; two specimens. Much smaller, with the prothorax comparatively wider and shorter, and more densely punctured. The elytra are more shining, and more strongly and sparsely punctured on the declivity; the head is sparsely but deeply punctured behind, and in front is densely granulate as usual. Length 4 mm.; .16 inch.

If I have failed to indicate more strongly the differences between these species, it is because they are not distinguished by any prominent or definite characters; and the student, who may have difficulty in identifying the species as here defined, would have almost equal difficulty, if the specimens in my collection were before him.

6. **D. brevicomis**, n. sp.

Elongate-cylindrical, red-brown, with a few long hairs on the prothorax, and numerous very short ones on the elytra. Head large, finely not densely granulate, rugose, occiput nearly smooth, face with an interrupted longitudinal impression, antennæ with circular compressed club, sutures transverse, funicle 5-jointed. Prothorax at base nearly twice as wide as long, as strongly bisinuate as in *D. frontalis;* very slightly narrowed towards the tip, and slightly constricted; punctures small, not dense, surface shining, with no trace of a dorsal line. Elytra opaque, striæ indistinct, composed of not very evident punctures; surface finely densely granulate, becoming punctulate on the declivity; in other respects it resembles the other species of the genus. Length 4.2 mm.; .17 inch.

One specimen; Middle California. Intermediate in form of prothorax between the next and the foregoing species, but strikingly different from both by the sculpture and pubescence of the elytra.

7. **D. frontalis** Zimm., Tr. Am. Ent. Soc. 1868, 149; (synon. excl).

Lake Superior to Georgia. The head is channeled and marked with approximate frontal tubercles; the occiput is finely punctulate, the front roughly punctured as usual. The interspaces of the declivity of the elytra are finely asperate, and the hairs are short. The prothorax is scarcely narrowed in front, and the base is more strongly bisinuate than in the other species. The club of the antennæ is round, strongly compressed and concave on one side, as in the other species; and the sutures are not straight, but curved. Length 3 mm.; .12 inch.

The frontal channel is deeper, and the granulate punctures larger, and denser in one sex than in the other.

Dr. Zimmermann cites as a synonym *Bostrichus frontalis* Fabr., Syst. El. ii, 389; the description appears to me not to correspond, and I have cited it above as pertaining to *Phlœotribus frontalis*, (p. 377).

BLASTOPHAGUS Eichhoff.

This genus does not properly belong to our fauna, and I mention it only for the purpose of correcting the error, which I committed of describing an accidentally introduced specimen of the common European *B. piniperda* under the name *Hylurgus analogus*, Tr. Am. Ent. Soc. 1868, 172. The last mentioned name must therefore be erased from our list. I also compared it with the European *H. ligniperda* on the authority of an incorrectly named specimen which I borrowed for comparison. If the genus should hereafter occur in our fauna, it can be easily recognized by the outer part of the funicle of the antennæ being divided into 5 joints, thus making the funicle 6-jointed, and by the club being ovate-pointed, not compressed, transversely annulated, with the joints smooth and shining, fringed with hairs. The beak is somewhat more distinctly developed than in *Dendroctonus*, and the antennal grooves are wider and deeper.

Group IV. **Crypturgi.**

This group consists of two genera, represented by very small species of elongate form, which agree with *Hylastes* in general appearance and sculpture, but differ by the beak being much shorter, and the prosternum very short and not excavated. The genus *Crypturgus* has been usually associated with the *Tomicini*, on account of the slender tarsi, but it makes a notable exception to the other members of that tribe by the large exserted head, and the absence of the hood-like prolongation of the prothorax. I have, therefore, thought it best to remove it from that position, and place it with *Dolurgus*, as a separate group. Though differing in the antennal club, which is solid in *Crypturgus*, and annulated transversely with the first joint corneous in *Dolurgus*, these two genera are otherwise closely related, and differ remarkably from neighboring forms by the small number of joints in the funicle. The prothorax is elongate-oval, rounded in front, nearly truncate at base; the scutellum is very small, not depressed, and the basal edge of the elytra is not elevated. The elytra are elongate-cylindrical, with the posterior declivity convex; the striæ are well marked, and strongly punctured; the interspaces narrow, finely punctulate and slightly pubescent. The ventral sutures are straight and deep; the first and fifth segments are longer than the others. The prosternum is very short, not excavated; the front coxæ are contiguous; the tibiæ are dilated, and finely serrate; the terminal spur is very small; the tarsi are slender, with the third joint not dilated.

Antennal club solid; funicle 2-jointed............... CRYPTURGUS.
" " annulated; funicle 3-jointed.......... DOLURGUS.

CRYPTURGUS Er.

1. **C. atomus** Lec., Tr. Am. Ent. Soc. 1868, 152.

Canada, Massachusetts, New York; under bark of dead pine branches. Length 1 mm.; .04 inch.

DOLURGUS Eichhoff.

1 **D. pumilus** Eichh., Berl. Ent. Zeitschr. 1868, 147; Chapuis, Mem. Soc Roy. Sc. Liége, 1869, 80; *Hylastes pumilus* Mann., Bull. Mosc. 1843, 297; ibid. 1852, 356; *Aphanarthrum* ‡ *pum.* Lec., Tr. Am. Ent. Soc. 1868, 152.

Alaska. Examination of specimens of *Aphanarthrum* subsequently obtained, shows that my reference of this species to that Madeiran genus was incorrect; there is no resemblance between them, except in the form and number of joints of the antennæ. Eichhoff describes the funicle as 4-jointed, but the error is corrected by Chapuis. Length 1.8 mm.; .07 inch.

Group V. **Hylastes.**

In this group a reversion is made towards *Cossonidæ* and some tribes of *Curculionidæ*, in the antennal funicle and club, the excavated prosternum, and the antennal grooves of the beak, which, though short and stout, is more developed than in any other *Scolytidæ*. The tibiæ are, however, more strongly serrate, and are armed with a strong apical spur; the tarsi are rather short, and the third joint is more or less dilated, bilobed or emarginate. The ventral sutures are straight and deep; first and fifth segments longer than the others. The head is exserted and prominent, the beak short and stout, with oblique deep grooves, which unite in the gular space, forming a transverse impression; the eyes are transverse, not very finely granulated. Antennæ with 7-jointed funicle and oval annulated club, which is not compressed, and has the basal joint large, corneous and shining, very much as in *Baris*. The scutellum is small, not depressed, and the basal margin of the elytra is not acutely elevated, though quite distinct in *H. granulatus* and *pinifex*.

Three genera are indicated by our species:

Front coxæ contiguous, or nearly so	2.
" " widely separated	SCIERUS.
Third joint of tarsi emarginate	HYLASTES.
" " " bilobed	HYLURGOPS.

HYLASTES Er.

I have but two species to add to those mentioned in my synopsis, which may be thus tabulated; all have the third joint of tarsi emarginate, not dilated; mesosternum truncate, not protuberant; tibiæ with very large teeth; prosternal ridges acute; basal margin of elytra not acute.

	Beak carinated	2.
	Beak not carinated; small, slender, dark brown, elytra coarsely punctured in rows, with rows of short suberect hairs	8.
2.	Glabrous or subglabrous species	3.
	More or less hairy	7.
3.	Elytral interspaces not convex, punctured and less rugose; form more slender, prothorax more densely punctured	4.
	Elytral interspaces convex, rough and rugose	6.
4.	Longer and narrower than *nigrinus* and more finely sculptured on the head and prothorax	5.
	Somewhat less slender, more coarsely sculptured	3. nigrinus.
5.	Prothorax nearly elliptical, more coarsely punctured	1. macer.
	Prothorax gradually narrowed in front, less coarsely punctured	2. longus.
6.	Elytra rougher, and muricate behind towards the sides	4. porculus.
	Rugosities finer, sides of elytra not muricate	5. cavernosus.
7.	Pubescence fine and short; prothorax equably punctured	6. gracilis.
	Hairs long and sparse; prothorax coarsely punctured, with smaller punctures intermixed	7. porosus.
8.	Interspaces of elytra opaque, rough with small granules	8. tenuis.
	Interspaces of elytra somewhat shining, rugose	9. exilis.

2. H. longus, n. sp.

Slender, cylindrical, black, nearly glabrous. Head densely punctured, beak finely carinate, front with a transverse impression. Prothorax longer than wide, base and hind angles rounded, sides slightly rounded, converging gradually to the tip, which is broadly rounded; punctures deep and strong, larger at the base than at the tip and sides, where they are also more dense; no smooth dorsal line is visible. Elytra less shining than the prothorax, with striæ composed of moderate sized punctures; interspaces nearly flat, wider than the striæ, densely, finely punctured. Club of antennæ brown, first joint composing about one-half of the mass. Length 4.5 mm.; .175 inch.

Colorado, Prof. F. H. Snow; one specimen. This species resembles closely *H. macer*, but can be easily recognized by the different form of the prothorax.

The following synonyms will complete the bibliography I have already given in my synopsis.

4. **H. porculus** Er. Wiegm. Archiv. 1836, i, 49 ; *H. carbonarius* Fitch, Noxious Ins. New York, 4th report, No. 249 ; *H. granosus* Chapuis, Mem. Soc. Roy. Sc. Liége, 1869, 73 ; *H. scabripennis* Zimm., Tr. Am. Ent. Soc. 1868, 149; ? *H. salebrosus* Eichhoff, Berl. Ent. Zeitschr. 1868, 146.

5. **H. cavernosus** Zimm., l. c. 149 ; ? *H. scobinosus* Eichhoff, Berl. Ent. Zeitschr. 1868, 146 ; Chapuis, l. c. 73.

Eichhoff gives Carolina as the locality ; Chapuis mentions Norfolk Sound, which, being on the Pacific coast, makes the reference doubtful. Perhaps the specimen came from Norfolk, Virginia, instead of Norfolk Sound. Should they prove to be the same, the name proposed by Eichhoff has priority by a few weeks.

9. **H. exilis** Chapuis, l. c. 20.

Florida, one specimen, Messrs. Hubbard and Schwarz. Nearly related to *H. tenuis*, but the prothorax is more coarsely punctured, and the interspaces of the elytra are not granulate, but rugosely punctured, and less opaque. Length 2.5 mm.; .10 inch.

HYLURGOPS n. g.

I have separated as a distinct genus the species referred to Erichson's second division, having the third tarsal joint broader and bilobed, and the mesosternum protuberant. They are quite different in form from true *Hylastes*, and resemble *Dendroctonus*, the prothorax being more narrowed forwards, and more finely and densely punctured. The basal margin of the elytra is so acutely defined in *H. granulatus* and *pinifex* that I should place them near *Hylurgus*, but for the scutellum, which is not depressed; and for the deeper antennal grooves, which remove them from the group of *Hylurgi*. The front tibiæ are less coarsely serrate than in *Hylastes*.

The species may be thus distinguished :

Prosternal ridges acute ; front transversely impressed. . . . 2.

Prosternal ridges indistinct; beak carinate, front not impressed; color brown, elytra variegated with spots of pale scales, basal margin acute, subserrate.................................... **1. granulatus.**

2. Beak carinate; basal margin of elytra subacute, subserrate........ .... **2. pinifex.**

Beak not carinate; basal margin of elytra subacute, subserrate......... .... **3. rugipennis.**

Beak not carinate; basal margin of elytra acute, serrate; alternate interspaces more elevated behind............................... .... **4. subcostulatus.**

1. H. **granulatus** Lec., Tr. Am. Ent. Soc. 1868, 175 (*Hylastes*).

Oregon and California. The variegated spots of the elytra are formed of small pale scales, and were not apparent in the two specimens upon which my description was based. Length 5 mm.; .20 inch.

2. H. **pinifex** Fitch, Noxious Ins. New York, 4th report, 43, No. 248; (*Hylastes*); Lec., Tr. Am. Ent. Soc. 1868, 176.

Lake Superior, Canada, Ohio. Length 5 mm.; .20 inch.

3. H. **rugipennis** Mann., Bull. Mosc. 1843, 297 (*Hylurgus*); ibid, 1853, 238 (*Hylastes*); Lec., loc. cit. 176; Chapuis, l. c. 76.

Alaska, Oregon and California. Length 4–4.5 mm.; .16–.18 inch.

4. H. **subcostulatus** Mann., Bull. Mosc. 1853, 239.

Oregon and Sierra Nevada; described by Mannerheim from Alaska. Length 4 mm.; .16 inch.

Hylastes **rufipes** Eichhoff, Berl. Ent. Zeitschr. 1868, 147; Chapuis, l. c. 79, probably belongs to this genus, but is unknown to me.

Hylastes **cristatus** Mann., Bull. Mosc. 1853, 239, from Alaska, may also belong here, but is unknown to me.

SCIERUS n. g.

I have separated under this generic name a species which agrees in general form with *Hylurgops*, but differs from it and *Hylastes* by the front coxæ being widely separated by the prosternum. The form of the third joint of the tarsi is intermediate, it being not as deeply bilobed as in *Hylurgops*, but broader than in *Hylastes*. It agrees with both in the antennæ, which have the funicle 7-jointed, and the club ovate-pointed, with the first joint smooth, shining, and nearly as long as the others united. The tibiæ are dilated and broadly serrate as in *Hylastes*; the terminal mucro is short. The first and second ventral segments are equal, and the third and fourth are shorter; the fifth is as long as the second. The other characters are those of the tribe, and it is not necessary to repeat them.

1. S. **annectens**, n. sp.

Oblong-cylindrical, dark brown, opaque, thinly clothed with very short depressed yellow hairs. Beak flat, punctured and hairy, about twice as wide as long, not impressed or carinate; head convex, punctures becoming finer and obsolete on the occiput. Prothorax one-third wider than long, rounded on the sides, narrowed in front, faintly impressed but not constricted on the sides, nearly truncate in front and at base; densely and strongly punctured with a narrow dorsal line, which is obsolete in some specimens. Scutellum rounded behind, not depressed. Elytra wider than the prothorax; basal margin rather acute, finely serrate; striæ deeply impressed, punctured; interspaces wider than the striæ, scabrous with transverse rugosities, becoming asperate on the sides towards the tip; the interspaces become more convex on the declivity, and the third and ninth unite near the tip, and then join the first so that the second is a little shortened. Beneath coarsely and sparsely punctured and pubescent, and less opaque; legs lighter brown. Length 3.6 mm.; .14 inch.

Anticosti Island, Gulf of St. Lawrence, W. Couper; British Columbia and Vancouver Island, G. R. Crotch. No sexual difference observed.

Family X. ANTHRIBIDÆ.

Mentum large, deeply emarginate in front, closely connate, (except in the group *Hormisci,*) with the gular peduncle, which is broad and short; buccal fissures consequently narrow, only partially exposing the base of the maxillæ; ligula large, corneous, narrowly emarginate at tip; palpi 3 jointed, inserted at the sides of the lower face of the ligula, distant, slender, cylindrical, longer than in other Rhynchophora and flexible, as in normal *Coleoptera* and in *Rhinomaceridæ*; last joint elongated, narrower at the tip.

Maxillæ visible in the narrow buccal fissures, with two narrow lobes, usually rounded and ciliate at tip; palpi slender, 4-jointed, with the last joint longer and narrower at the tip.

Mandibles flattened on the upper surface, curved, pointed or emarginate at tip.

Antennæ inserted usually under the sides of the front, rarely upon the front. They are 11-jointed, slender and not geniculate; the first joint is stouter, but scarcely longer than the second; joints 3–8 slender, pubescent; 9–11 broader, more or less compressed, finely pubescent and sensitive. The antennæ of the ♂ are sometimes much longer than the body. The outer joints form a compact oval club in *Hormiscus*.

Head prominent, not deflexed; beak broad, flat, sometimes so short as to be indistinct; never cylindrical or slender, and never separated from the front by a transverse impression. Eyes moderate in size, not very finely granulated, rounded, sometimes slightly emarginate in front. Labrum distinct, quadrate, fringed with hairs. Gular suture completely obliterated.

Prothorax of varied form, usually trapezoidal and truncate in front; rarely somewhat rounded over the head (*Choragus*); base truncate, with a transverse, elevated line which is either antebasal (*Tropiderini*) or entirely basal; this line is abruptly bent forwards at the sides, and forms a more or less abbreviated side margin.

The prosternal sutures are entirely obliterated, as is also the short suture behind the posterior point of the prosternum, so that the under surface consists of but one piece. The coxal cavities are rounded, and narrowly separated.

Mesosternum flat, triangular behind, with the point rounded, and separating the middle coxæ; cavities rounded, epimera transverse, oblique, not attaining the coxæ.

Metasternum long, side pieces narrow, or moderate in width, wider in front, with the outer angle prolonged forwards; in many genera there is a transverse impression in front, simulating a suture.

Elytra conjointly rounded behind, and forming a small sutural fold, which fits into a deep emargination of the pygidium; fold of the inner surface acute, not prolonged much behind the middle. Epipleuræ distinct. The striæ are ten in number, with a short scutellar one as in *Carabidæ*; this scutellar stria is usually about one-fourth the length of the elytra, and does not connect itself with the sutural stria.

Abdomen with five free, and sometimes nearly equal ventral segments; sutures straight; intercoxal process triangular, acute or rounded in front; dorsal segment membranous, except the pygidium, which is corneous, declivous and exposed; no anal segment in the ♂.

Anterior coxæ narrowly separated, globose; middle coxæ moderately separated, rounded; hind coxæ transverse, not prominent, never very widely separated.

Legs slender, front pair sometimes elongated in ♂; tibiæ truncate at tip, without spurs or hooks.

Tarsi brush-like beneath, 4-jointed; second joint triangular, emarginate; third joint bilobed, sometimes large, sometimes small; fourth joint slender with divergent claws, which are either simple or toothed.

Our genera represent four tribes:

Antennæ inserted at the sides of the beak;
  Prothoracic ridge not basal........................ **TROPIDERINI.**
  Prothoracic ridge basal........................... **BASITROPINI.**
Antennæ inserted on the front; prothoracic ridge basal;
  Elytra striate as usual........................... **ARÆOCERINI.**
  Elytra not striate................................ **XENORCHESTINI.**

Tribe I. TROPIDERINI.

The genera of this tribe are sufficiently distinguished by the position and form of the prothoracic ridge, which is remote from the base, more or less sinuous, and flexed obliquely at the sides. The antennæ are situated under the lateral edge of the beak, which is sometimes flattened and expanded so that the antennal cavities are partially covered.

Three groups occur in our fauna:

Eyes entire; suture of mentum obliterated........ 2.
  " emarginate; suture of mentum distinct.............. **Hormisci.**

2. Sides of beak not dilated; antennæ very long............ **Ischnoceri.**
" " dilated over the antennal cavities.......... **Tropideres.**

Group I. **Ischnoceri.**

Beak longer than the head, dilated at tip; antennal cavities large, lateral, limited above by a small, elevated line, which descends to the inferior margin of the eyes. Eyes longitudinal, elliptical, rather coarsely granulated. Antennæ very slender, longer than the body in ♂; two-thirds as long in ♀; first joint very short; second twice as long as first, and more than one-half as long as third; 9–11 broader, forming a compressed, loose, oval club. Tarsi with the first joint long; second triangular, emarginate, with prolonged angles; third as wide as the second, bilobed; claws armed with a long, acute tooth at the middle.

ISCHNOCERUS Schönh.

1. I. **infuscatus** Fahraeus, Sch. Curc. v, 192; *Meconemus tuberculatus* Imhoff and Labram, Gen. Curc. 1, 40.

Mexico, extending into the Southern States as far as South Carolina. In the Mexican specimens the pubescence is somewhat paler and more dense; it is *Ischnocerus macrocerus* of Dejean's Catalogue.

This is a narrow species, with the base of the prothorax truncate; there is a trace of a second transverse raised line between the base and the antebasal ridge; the latter is situated about one-fifth from the base, slightly sinuate, and forming an obtuse angle at the middle; flexed obliquely forwards on the side, where a distinct lateral angle is formed behind the middle. The pubescence is yellowish brown, mixed with pale gray, and does not exhibit any distinct pattern. Length 6.8–10 mm.; .27–.40 inch.

Group. II. **Tropideres.**

The sides of the beak in the insects of this group are dilated over the antennal cavities, which are therefore not visible from above. The form of the antebasal ridge differs in each genus, and in conjunction with the antennal club and tarsal claws affords easy characters for distinguishing the genera. The eyes are entire, either rounded or oblique.

Antennal club narrow, not compressed........... 2.
" " oval, compressed.................. 3.
2. Prothoracic ridge strongly angulated and touching the base at the middle; claws simple........... GONOTROPIS.
Prothoracic ridge straight at the middle, base deeply biemarginate; claws acutely toothed.......... EURYMYCTER.
3. Eyes oblique, slightly oval, beak short............ TROPIDERES.
Eyes rounded, beak longer, antennæ ♂ very long.. ALLANDRUS.

GONOTROPIS n. g.

Body rather robust and convex. Beak longer than the head, gradually narrowed to the middle, then widened to the tip, which is truncate with a very small emargination at the middle; upper surface slightly uneven. Eyes situated well up on the head, separated by a space not greater than diameter of each, rounded, moderately convex, finely granulated. Antennal cavities deep, small, near the tip of the beak, visible only from the side or from beneath. Antennæ half as long as the body; first joint stoutly clavate, second joint shorter; 3–8 each equal in length to the first, but more slender; ninth a little longer, gradually thicker externally, tenth transverse, eleventh oval-pointed; the three forming an elongate but not compressed club. Mentum with the lobes broadly rounded at tip. Prothorax narrowed from near the base forwards; ante-basal ridge strongly curved each side, with the concavity directed backwards, so as to form an angle at the middle, nearly touching the base, which is truncate; near the sides this ridge is flexed obliquely forwards, then on the sides it is bent forwards, and runs somewhat obliquely as far as the middle; the prothorax is deeply channeled behind the middle, and this channel is crossed at its anterior end by a short transverse impression. Elytra wider than the base of the prothorax, base straight for two-thirds of its width, then obliquely backwards leaving a scutellar excavation. Scutellum small, elevated, with a deep fovea behind. Disc of the elytra with a large elevation near the base of the third interspace, which is also uneven behind; the fifth and seventh are slightly uneven behind the middle. The first joint of the tarsi is longer, second triangular, emarginate, third a little narrower, bilobed; claws simple, divergent.

1. **G. gibbosus**, n. sp.

Subovate, convex, black, without lustre, beak, and sides of head below the eyes, densely clothed with fine white pubescence. Prothorax deeply channeled from before the middle to the base, and with a short deep transverse line at the middle; the edges of the cruciform impression thus produced are clothed with white pubescence; broadly concave near the sides adjacent to the transverse ridge. Scutellum white-pubescent. Elytra with fine punctured striæ and very densely finely punctured interspaces; a large saddle-shaped spot of white pubescence extends from the middle forwards becoming narrowed to the space between the third interspaces near the base, which it attains; there are also some smaller white and black pubescent spaces behind the middle. Beneath pruinose with fine whitish pubescence. Length 5 mm.; .20 inch.

One specimen, Colorado.

EURYMYCTER, n. g.

The well-known species upon which this genus is established, represents in our fauna the European *Platyrhinus*, but differs by the beak being narrower than the head and strongly dilated at the tip; it is uneven above, with three wide grooves and two ridges, extending as far as between the antennæ, where they end, leaving the dilated part of the beak flat; the sides are extended over the antennal cavities, which are small and visible only from the sides and beneath. The mandibles are flat, acute, and toothed on the inner side; eyes rounded, finely granulated. The antennæ are half as long as the body; first and second joints a little stouter, and nearly equal; 3–8 longer, shining; ninth of the same length, gradually thicker externally and sensitive; tenth about one-third shorter, oval, longer than wide, sensitive; eleventh elongate-ovate, pointed, as long as the ninth and sensitive; these joints are not compressed, and form an elongate loose club. Mentum with the lobes narrowly rounded, and subacute. Prothorax very uneven with large approximate foveæ; broadly transversely impressed before the middle; antebasal ridge nearly straight, about one-fifth from the base, which is strongly biemarginate for the reception of the bases of the elytra; at the sides, the ridge is bent at an obtuse angle, and descends obliquely, forming an obtuse lateral protuberance about the middle; in front of this the prothorax is gradually obliquely narrowed. The elytra are wider than the prothorax, uneven with short transverse rugosities and elevations; striæ composed of large distant punctures; base separately rounded and finely margined, not excavated near the scutellum, but obtusely elevated from the first to the fifth stria. The alternate interspaces are wider and more convex. The first joint of the tarsi is long, the second triangular and emarginate; third not narrower than second, bilobed; claws toothed at the middle. First and fifth ventral segments longer than the others.

1. **E. fasciatus**; *Macrocephalus fasc.* Oliv., Ins. iv, 80, 9; pl. i, f, 9; *Anthribus fasc.* Kirby, Fauna Bor. Am. iv, 206.

Northern States, Canada, Vancouver's Island. A large species conspicuous by the beak and a broad transverse band behind the middle of the elytra being clothed with snow-white hair. Length 6.5–9.5 mm.; .25–.37 inch.

TROPIDERES Schönh.

1. **T. bimaculatus** Lec., Proc. Ac. Nat. Sc. Phila. vii, 218; *Macrocephalus bim.* Oliv., iv, 80, 14; pl. 2, f. 19; *Anthribus quadrinotatus* Say, Journ. Ac. Nat. Sc. Phila. v, 249; ed. Lec., ii, 314.

New York, Wisconsin. A small, rather slender species, easily known by the white humeral spot and transverse subsutural spot behind the middle; the beak is broad, not longer than the head; the prothorax is feebly and obtusely tuberculate at the sides. The eyes are more widely separated, and more oblique than in the two preceding genera. The antebasal ridge is obtusely angulate at the middle with the angle directed forwards, and obtusely flexed on the sides. Length 4.7 mm.; .18 inch.

Gemminger and Harold have incorrectly referred *A. cornutus* Say to this genus; it will be found below under *Anthribus*.

2. **T. rectus**, n. sp.

Oval-cylindrical, dark brown, with spots of yellow pubescence, and upon the elytra also a few white dots. Head and prothorax opaque, very densely and rather finely punctured; antebasal ridge nearly straight and parallel with the base, suddenly flexed at the sides, and extending nearly to the middle; the angle near the base at the flexure appears almost rectangular; sides obliquely and broadly rounded. Elytra with striæ of large punctures, interspaces even, alternately variegated with distant, small white dots; a spot of yellow and white hair covers the base of the 4–7 interspaces. Beneath thinly clothed with fine gray hair; legs mottled with gray hair; antennæ testaceous with dusky-club, slender, extending to the base of the prothorax. Length 4 mm.; .15 inch.

Enterprise, Florida, two specimens; Mr. E. A. Schwarz. Quite different in appearance from the preceding, though presenting no special structural peculiarities.

ALLANDRUS Lec.

I have established this genus upon a small Canadian species remarkable by the sexual differences The form is as slender as in *Tropideres*; the beak is longer than the head, narrower at the base, slightly dilated at the tip; in the male it is furnished with a very high crest, gradually fading out in front; in the ♀ only an obsolete carina is seen. The antennæ in the ♀ extend to the base of the elytra, and are just as in *Tropideres*, except that the second joint is thinner; joints 9–11 form an oval, compressed club. In the ♂ the antennæ are as long as the body; joints 3–8 elongated, and a little thickened at tip; 9–11 flattened, forming a loose club. The prothorax as in *Tropideres*, but not tuberculate at the sides; transverse ridge remote from the base, feebly curved, and subsinuate; flexed obliquely forward at the sides. Eyes rounded, lateral, prominent, finely granulated. Tarsi more slender than usual; third joint not as wide as the second; claws appendiculate rather than toothed. Mentum with the lobes wide, narrowly rounded at tip; ligula large and coraceous, filling up the emargination of the mentum more than in the preceding genera, (somewhat as in certain *Lebiini*).

1. **A. bifasciatus**, n. sp.

Blackish brown, with a brassy tinge; head and prothorax densely punctured, thinly clothed with cinereous hair; the latter longer than wide, narrowed at tip and base; elytra with punctured striæ, and two ill-defined, broad bands of cinereous hair; the anterior one extending along the suture to the base; scutellum white. Length 4.3 mm.; .17 inch.

Canada, one pair, Mr. Billings; Illinois, one ♀, Mr. B. D. Walsh. This is *Tropideres oblongus* ‡ Dej. Cat.

Group III. **Hormisci**

The genera upon which I have founded this group, seem sufficiently distinct from the other *Corrhecerides* of Lacordaire to be separated from them. I would define it by the following characters:

Beak not dilated at the sides over the antennal cavities. Eyes emarginate, not finely granulated. Prothoracic ridge antebasal, curved or obtusely angulate backwards at the middle, flexed obliquely forward at the sides. Tarsi with the first joint long; second triangular, scarcely emarginate;

third bilobed, not narrower, but shorter than the second; claws acutely toothed at the middle. Mentum transverse, less deeply emarginate than usual, with the emargination nearly filled by the broad basal piece of the ligula; transverse suture between the gula and mentum distinct.

Antennal club 3-jointed........................... 2.
" " solid, sensitive only at tip........... HORMISCUS.
2. Eyes feebly emarginate; claws indistinctly toothed.. TOXOTROPIS.
Eyes strongly emarginate; claws cleft almost to the base...................................... GONOPS.

HORMISCUS Wollaston.

In this genus the form is cylindrical and less slender than in *Tropideres*. The beak is broad and flat, not longer than the head, with the antennal cavities lateral, not covered by the sides. Eyes rather large, less finely granulated, oblique, feebly emarginate; antennæ alike in both sexes, hardly extending to the base of the prothorax, club oval, apparently solid. Prothorax scarcely longer than wide, gradually narrowed in front; more rapidly narrowed behind the transverse carina, which is slightly oblique, parallel with the base, and ends each side in a lateral cusp.

1. **H. saltator**, n. sp.

Brownish black, mottled with spots and bands of cinereous pubescence; prothorax densely and finely punctured; elytra with rows of large and deep punctures, about twice as long as the prothorax. Length 1.2–1.6 mm.; .05 –.07 inch.

Middle and Western States, not rare; I have adopted the specific name with which it is labeled in the collection of the late Dr. Zimmermann. There are few prominent characters in this singular little insect, except such as are of generic value. It agrees with the Galipagoan *H. variegatus* in having the transverse ridge of the prothorax broadly angulated at the middle, but the latter differs, according to description, in color, and in having the elytra indistinctly punctato-striate. The specimens vary greatly in appearance, according as the pubescence is more or less abraded. In the best preserved individual, the prothorax is mottled, and the elytra also, but the mottlings of the latter are arranged so that a subscutellar space on each elytron, and a broad, post-medial band not reaching the margin, are left free from cinereous spots. The posterior transverse carina of the prothorax is slightly oblique, forming a very obtuse angle backwards on the median line, and projects at the side as a small, sharp cusp.

TOXOTROPIS n. g.

This genus is closely related to *Hormiscus*, and in fact only differs from it by the antennal club which is elongate-oval, compressed, and composed of three distinct joints equal in length. The eyes are rather finely granulated, and only feebly emarginate; the antennal cavities are small and rounded. The antebasal ridge is regularly curved in an arc of a circle, for the greater part of its length, but directed transversely towards the sides, and not flexed forwards; claws feebly toothed at the middle.

1. **T. pusillus**, n. sp.

Of the same size, form and color as *Hormiscus saltator*, brown, varied with patches of fine white pubescence; eyes larger and more prominent; prothorax more finely punctured. Elytra with striæ of rather large punctures; interspaces even. Length 1.2 mm.; .05 inch.

Tampa, Florida, one specimen, Mr. E. A. Schwarz.

2. **T. approximatus**, n. sp.

Of the same form, color and sculpture as *T. pusillus*, but the antebasal ridge is less curved, and therefore is more parallel with, and nearer to the base than in that species. The hind angles near the base are therefore less prominent, and the body is somewhat stouter. Length 1.5 mm.; .06 inch.

One specimen, San Diego, Cal.; Mr. G. R. Crotch.

GONOPS n. g.

This genus is also related to the two preceding, but differs from *Hormiscus* by the antennal club compressed, and composed of three joints equal in length; the antennal cavities are small, and the eyes are deeply emarginate and rather finely granulated. It differs from both by the claws being cleft almost to the base, with the inner portions converging as in *Anthonomus*. It also differs from all the other genera in our fauna by the middle and hind tibiæ being armed with a small mucro or spine at the inner side of the tip. The form is a little stouter than in *Hormiscus*; the antebasal ridge of the prothorax is curved in the arc of a circle; towards the sides it is nearly transverse, and is not flexed forwards.

1. **G. fissunguis**, n. sp.

Oblong, rather robust, brown, mottled with small spots of yellowish gray pubescence. Head and prothorax opaque, very densely and finely punctured; the latter a little wider than long, narrowed from the end of the ridge forwards, but scarcely rounded on the sides; rapidly and concavely narrowed behind the ridge, the end of which forms an acute lateral angle. Elytra not wider than the widest part of the protharax, convex; striæ composed of moderate sized punctures, interspaces very finely punctulate. Length 2.5 mm.; .10 inch.

Three specimens from Big Trees, California, sent by Mr. James Behrens to Dr. Horn.

Tribe II. BASITROPINI.

The only characters of a general kind which can be given to distinguish this from the other tribes, are that the antennæ are inserted under the sides of the beak, and that the prothoracic ridge is quite basal, causing the surface behind it to become perpendicular; it consequently attains the hind angles, and is there flexed forwards, not obliquely and at an obtuse angle, but rectangularly. As a farther consequence of this arrangement, the basal margin of the elytra is acute.

Our species represent but three groups:

Beak with parallel or nearly parallel sides.............. **2.**
" narrower in front, trapezoidal.................. **Brachytarsi.**
2. Tarsi with third joint wider, deeply bilobed, visible from above.. **Anthribi.**
Tarsi with the third joint bilobed, not visible from above **Cratopares.**

Group I. **Anthribi.**

These species are sufficiently distinguished from *Cratopares* by the third joint of the tarsi being not narrower than the second, and quite visible from above; the second joint is broad, triangular and rather flat, emarginate at tip. The sides of the beak partly cover the antennal cavities, which are large and deep, and but slightly visible from above. The antennæ are sometimes very long in the ♂, and the first joint is stouter and shorter than usual. The tarsal claws vary according to genus. Except in *Anthribus* the antennal cavities are somewhat distant from the eyes.

Hind angles of the prothorax not directed outwards...................................... 2.
Eyes emarginate, hind angles of prothorax directed outward; front coxæ contiguous...... EUSPHYRUS.
2. Front coxæ contiguous or nearly so............ 3.
" " well separated by the prosternum. 4.
3. Claws almost cleft, body elongate-cylindrical, eyes emarginate............................ PHŒNICOBIUS.
Claws feebly appendiculate, body stout subcylindrical, eyes oval...................... PIEZOCORYNUS.
4. Eyes rounded................................ ANTHRIBUS.
Eyes broadly emarginate........................ TOXONOTUS.

EUSPHYRUS n. g.

The beak is shorter than the head, broader than long, slightly narrowed at base, obliquely narrowed in front of the widest part, not emarginate at tip, but bordered as usual with a coriaceous clypeus; eyes moderate, ovate, broadly emarginate in front, not coarsely granulate; antennæ not longer than head and thorax; first and second joints thicker not elongated, 3–6 slender, gradually a little shorter, seven and eight slightly thicker, 9–11 equal in length, forming a loose compressed club. Prothorax wider at base than its length, gradually narrowed from the base, feebly rounded at the sides, not projected over the head in front, but truncate; hind angles acute, prominent laterally; transverse ridge absolutely basal, scarcely extending along the sides. Elytra cylindrical, deeply punctato-striate, not wider than the prothorax, and about twice as long. Front coxæ prominent, contiguous; tarsi as long as the tibiæ; first joint as long as the others united, third joint not narrower than the second, very short; claws with a small acute tooth near the base. Mentum more narrowed behind than usual, buccal fissures wider.

1. **Eu. Walshii** n. sp.

Elongate-oval, subcylindrical, brownish-black, opaque, clothed with fine cinereous pubescence, and mottled with patches of yellowish-white hair; head and prothorax densely and finely punctured, the latter feebly bisinuate at base, with the hind angles acute, divergent; elytra with deep strongly punctured striæ, disc broadly impressed transversely about one fourth the length from the base; antennæ at base, tibiæ and tarsi dark testaceous. Length 3.2 mm.; .13 inch.

One specimen, Illinois; B. D. Walsh. This species has the general appearance of *Brachytarsus*, and without examination of the characters of the genus and group might readily escape recognition.

PHŒNICOBIUS n. g.

Body elongate-cylindrical. Beak about as long as wide; sides acutely elevated in the ♂, but less so in ♀, limiting the antennal cavities which are large and deep, extending nearly to the tip, but not limited behind, and not reaching the eyes; the beak is emarginate in front, and finely carinate, the carina terminating behind in an angulated impressed line. Eyes coarsely granulated, rounded, somewhat transverse, broadly emarginate in front. Antennæ (♂) much longer than the body; first joint thick, one-half longer than wide; second one-half the length, and much thinner; 3–5 very long, equal, extending to the second ventral suture; 6–9 gradually a little shorter, densely fringed beneath with short, fine, curled hairs; 10–11 together longer than ninth, not thicker, similarly fringed; 11th pointed and slightly curved. Mentum with the lobes rather acute at tip, and the bottom of the emargination straight. Prothorax longer than wide, narrowed in front of the middle and slightly rounded on the sides; basal ridge flexed rectangularly at the sides, and extending a little in front of the middle; inferior basal margin, (on the perpendicularly declivous face which is adapted to the base of the elytra), finely crenulate. Elytra not wider than the base of the prothorax, margined at base; scutellum small, rounded, not depressed; striæ composed of large punctures, interspaces nearly smooth.

Front coxæ very narrowly separated by the prosternum. Tarsi with the first joint not longer than the second and third; second broadly triangular, with the apical angles prolonged; third joint still wider, excavated above for the articulation of the next joint, but scarcely emarginate beneath, forming a broad cushion as in certain *Calandridæ*, not less dilated in ♀ than ♂; claws with a long, basal tooth, causing them to appear almost cleft as in *Anthonomus*. The ventral segments gradually diminish in length; the fifth is broadly emarginate; the pygidium is channeled more deeply than usual, and the groove extends nearly to the tip.

The antennæ of the ♀ are three-fourths as long as the body; the joints are proportioned relatively as in the ♂, but the last three (9–11) are broader, forming a loose, elongate club, which is slightly fringed beneath. The other joints are not fringed.

1. P. Chamærops, n. sp.

Elongate-cylindrical, brown, mottled with fine pubescence of gray, yellow, fulvous and black colors; head and prothorax coarsely punctured; elytra with the first and alternate interspaces slightly more convex, tessellated with black and yellow; the intervening spaces with cinereous hair. Under surface mottled; metasternum densely clothed with yellowish-white pubescence. Legs and antennæ also mottled with gray and dark brown pubescence; the outer half of the ninth and the whole of the tenth and eleventh joints of the antennæ are nearly black. Length (♂) 7.3–11 mm.; .29–.44 inch; (♀) 4.5–9.3 mm.; .18–.37 inch.

Florida, abundant on *Chamærops palmetto*; Messrs. Hubbard and Schwarz.

The antennæ of the smallest ♂ are scarcely longer than the body; those of the largest are nearly double the length. This is *Anthribus cylindricus* † Dej. Cat.

PIEZOCORYNUS Sch.

Body stout, cylindrical. Beak broad, flat, not as long as wide, not emarginate at tip; antennal cavities large and deep, not extending to the eyes, partially covered by the sides of the beak. Eyes subtriangular, coarsely granulated. Antennæ (♂)* one-half longer than the body; first joint stout, rounded; second nearly twice as long, conical; 3–8 more than twice as long as the second, slightly thickened towards the tip; 5–8 feebly carinate on the outer face; eighth more flattened towards the tip than the others, 9–11 forming a compressed, elongate club, pubescent and sensitive, in which the tenth and eleventh joints together are shorter than the ninth; the last named is obliquely emarginate at tip, and twice as long as wide; the tenth is transverse and similarly emarginate. Mentum with the lobes subacute at tip, the emargination rounded, and the buccal fissures rather wide. Prothorax wider than long, truncate at base, with the ridge flexed rectangularly at the hind angles, and extending along the sides nearly to the tip; sides gradually converging and slightly rounded. Elytra not wider than the prothorax, with punctured striæ; third and fifth interspaces wider and slightly more convex. Front coxæ nearly contiguous; tarsi with the first joint a little longer than the second, which is broad, triangular and emarginate; third joint wider than the second, deeply bilobed; claws broadly but not strongly appendiculate.

The antennæ of the ♀ are about one-half as long as the body; the second joint is longer and more slender; the subsequent joints 3–8 are about one-half longer than the second, and the club is broader.

Antennæ not very slender; prothorax with two shallow depressions and three elevations occupying the middle third.. **1. dispar.**
Antennæ very slender; prothorax without impressions or elevations; pubescence mottled yellow brown and black **2. mixtus.**

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*This description is made from *P. dispar*; it is still doubtful if the sexual differences exist in the other species.

Antennæ very slender; prothorax without impressions or elevations; pubescence nearly black.................. **3. mœstus.**

1. **P. dispar** Gyll., Sch. Curc. i, 140.

This species, first described from Brazil, occurs in Missouri and Texas. It differs from the following in the proportions of the antennal joints, but not sufficiently to place the species in separate genera; the markings of the elytra are similar, but in the present species, in well preserved specimens, there is a greater condensation of ochreous pubescence along the first and second interspaces, which thus cease to be tessellated. Length 6.1–7.3 mm.; .24–29 inch.

2. **P. mixtus** n. sp.

Middle and Southern States, rare. Oblong-cylindrical, opaque, brown, mottled with testaceous; head and prothorax very densely punctured, the latter narrowed in front, not rounded on the sides; elytra with an obtuse elevation each side near the base, striæ composed of deep approximate punctures, interspaces tessellated; antennæ very slender, joints of the club equal in length. Length 4.7–6 mm.; .17–.24 inch.

Of the same form and color as *P. dispar*, but smaller, with the sides of the prothorax nearly straight, and the antennæ more slender, and quite different in the terminal joints. The second joint is more strongly clavate, the 3–8 very slender, gradually diminishing in length as in *P. dispar* ♀. but more slender, the eighth being very feebly triangular, ninth, tenth and eleventh forming a loose club, the two former not emarginate, the latter not narrower; the ninth is longer than the eighth, and the tenth and eleventh a little shorter.

Three specimens are before me, in which I can perceive no sexual differences; the antennæ are about two-thirds the length of the body. This is *Tropideres caliginosus* ‡ Dej. Cat.

3. **P. mœstus**; *Anthribus mæstus* Lec., Ann. Lyc. Nat. Hist. N. York, i, 172; pl. xi, f. 13.

Georgia and Florida. This species exactly resembles the preceding, except that it is a little more robust, and the pubescence is finer and of a grayish-black color, tessellated with black on the elytra; the only white spots are two small dots on the prothorax, one at the middle of the apical margin, the other in front of the scutellum, which is also white. The legs are annulated with dark cinereous. Length 4 mm.; .16 inch.

The figure given by my father, like all others on the plate, is quite characteristic.

ANTHRIBUS Fabr. (nec Geoffroy); emend. Lac.

Lacordaire has restricted this generic name to those members of the present tribe in which the front coxæ are rather widely separated by the prosternum. Additional characters are: the beak flat with parallel sides, wider than long and feebly carinate in the first species; eyes rounded, convex, coarsely granulated; antennal cavities large, extending to the eyes. Antennæ half as long as the body, second joint somewhat longer than the third, and equal to the fourth; 4–8 slightly diminishing in length and increasing in thickness; 9–11 forming a compressed oval club. Prothorax with the ridge extending along the sides to the middle. Elytra cylindrical, not wider than the prothorax, with striæ composed of large punctures. Tarsi with the first joint a little longer than the second, which is triangular and emarginate; third as wide as the second, deeply bilobed; claws acutely toothed at the middle. Mentum with the lobes subacute at tip, gula transversely impressed just behind the buccal fissures.

Pubescence tufted; elytra with a large transverse white spot
in front of the middle.................................. 1. **cornutus.**
Pubescence short, uniform, dense, yellowish-gray.......... 2. **lividus.**

1. **A. cornutus** Say, Curc. 4; ed. Lec., i, 262; *A. coronatus* Gyll., Sch. Curc. i, 141.

Atlantic States, especially Georgia and Louisiana. Easily recognized by the tufts of hair on the prothorax and elytra, and by the conspicuous common transverse white spot in front of the middle, which extends to the sixth stria. Length 4.6–5.8 mm.; .18–.23 inch.

2. **A. lividus** n. sp.

Elongate-cylindrical, brown, densely clothed with short depressed mud-colored hairs, club of antennæ dark. Beak entirely flat, not at all carinate. Prothorax longer than wide, slightly rounded on the sides, narrowed from the middle to the apex, which is broadly rounded; side margin extending to the middle. Elytra with striæ composed of distant small punctures, entirely even and equal in width. Pygidial groove very short, not extending beyond the tips of the elytra. Length 4.4 mm.; .17 inch.

One specimen, Lake Harney, Florida; Messrs. Hubbard and Schwarz. The front coxæ are less separated than in *A. cornutus*, but are far from being approximate, as in the other genera of the tribe. I have adopted the name under which it appears in the catalogue of Dejean.

TOXONOTUS Lac.

1. **T. fascicularis** Lac., Gen. Col. vii, 576; *Anthribus fasc.* Sch., Curc. i, 132.

A fine ♂ of this well-known Cuban species was found by Mr. E. A. Schwarz at Enterprise, Florida, in May. The reniform eyes and legs thickly clothed with erect flying hairs, as in many *Cerambycidæ*, entitle it fully to generic recognition; and the prolongation of the first joint of the tarsi into a long spine in the ♂ is a singular character, not occurring in any other member of the family. Length 9.2 mm.; .37 inch.

Group II. **Cratopares.**

The insects of this group, represented by only two species in our fauna, differ from the *Anthribi*, chiefly by the second joint of the tarsi less dilated, longer, and though deeply emarginate at tip, concealing the third joint so that the articulation is not visible from above; but merely the lobes, which do not extend beyond the prolonged angles of the second joint. The beak is flat and parallel on the sides ; the antennal cavities extend to the eyes, which are oval and coarsely granulated, somewhat truncate in front. The side margin of the prothorax extends to about the middle ; the base is slightly bisinuate, and the lower basal margin is very well defined, so that when the prothorax is deflexed, it might be supposed that the transverse ridge was not absolutely basal. The same is the case, though to a less extent, in the genera of the preceding group. The front coxæ are contiguous, and the mentum is but feebly emarginate in our species ; the buccal fissures are rather wide.

CRATOPARIS Sch.

Our two species differ by the color of the pubescence :

Brown, with the sides of the prothorax, and large elytral spot concave backwards, yellowish-gray, rest of the surface mottled.. 1. **lunatus.**

Black, varied with white ; elytral spot irregular, extending to the base, enclosing a quadrate black scutellar space, apex of elytra white........................... 2. **lugubris.**

1. C. **lunatus** Fahraeus, Sch., Curc. v. 221 ; Labram and Imhoff, Gen. Curc. i, 56; *Anthribus lun.* Fabr., Syst. El. ii, 409; *Macrocephalus albifrons* Oliv., iv, 80, 12, pl. 2, f. 16 ; *Anthribus albifrons Boh.*, Bull. Mosc. vi, 18 ; *Euparius lunatus* Gyll., Sch. Curc. i, 140. *Euparius paganus* Gyll., Sch. Curc. i, 142 ; *Cratoparis pag.*, ibid. v, 225, small specimens.

Atlantic States, abundant. The larva is described by Chapuis and Candéze, Cat. Larv. Col. p. 200.

2. C. **lugubris** Fahraeus, Sch., Curc. v, 224 ; *Macrocephalus lug.* Oliver, iv, 80, 13, pl. 2, f. 17 ; *Euparius lug.* Gyll., Sch., Curc, i, 141 ; *Anthribus notatus* Say, Journ. Ac. Nat. Sc. Phil. v, 248 ; ed. Lec., ii, 312.

Atlantic States, abundant southwardly.

Group III. **Brachytarsi.**

In this group the beak is gradually narrowed from the eyes forwards, so as to become trapezoidal in form ; the antennal cavities extend to the eyes, which are coarsely granulated and emarginate in front. The first and second joints of the antennæ are stout, the second a little longer, 3–8 shorter, gradually a little wider ; 9–11 much wider, forming an oval compressed sensitive club. Prothorax rounded in front, overhanging the head, basal ridges flexed rectangularly at the angles, but extending only a very short distance along the sides; inferior basal margin acute. Elytra with even and equal interspaces. Tarsi with the first joint scarcely longer than the second, which is triangular and emarginate ; third deeply bilobed, not narrower than the second, claws toothed near the tip, so as to appear cleft. Mentum deeply emarginate with lobes, rounded at tip ; gula transversely impressed.

Our species represent two genera, one of which has not been previously recognized.

Basal ridge flexed abruptly forwards at the hind angles, and continued along the sides of the prothorax for a short distance............... **BRACHYTARSUS.**
Basal ridge gently rounded and becoming obsolete at the hind angles.............................. **ANTHRIBULUS.**

BRACHYTARSUS Sch.

This genus contains the type of Geoffroy's genus *Anthribus;* but in consequence of his only semi-recognition of the binominal Linnæan nomenclature, of a definition properly accompanied by a specific name, indicating the object described, was delayed until 1799. The generic name thus proposed by him (1764), was appropriated by Olivier (1789), and by Latreille and Fabricius subsequently, and applied to an assemblage of species now divided into several genera. Schönherr afterwards divided this assemblage of species, and gave the name *Brachytarsus* to the genus here treated of. I cannot, therefore, advise the restoration of the name *Anthribus*, with the authority Geoffroy, to this genus, even though it be sanctioned by the authority of the Munich Catalogue, and the Check List of Mr. Crotch.

Legs testaceous not annulated........................ **2.**
Legs brown, annulated with darker; elytra tessellated on the alternate interspaces.......................... **1. alternatus.**
2. More elongate, densely and coarsely pubescent with yellowish-gray hair, with indistinct stripes of gray.. **2. griseus.**
Pubescence coarse and dense, yellowish-gray, slightly mottled with paler dots on the elytra.............. **3. limbatus.**
Pubescence finer, scarcely mottled, body more elongate than in *B. limbatus*............................ **4. plumbeus.**
Pubescence coarse and dense, brownish-yellow, not mottled; smaller and more elongate than *B. limbatus*.. **5. vestitus.**
Shorter and stouter, pubescence finer, gray, not mottled; thighs usually dusky.......................... . **6. tomentosus.**
Longer, pubescence grayish-yellow, mottled with dark brown, elytra each with a basal spot, and another behind the middle.................................... **7. variegatus.**

1. **B. alternatus.** *Anthribus alt.* Say, Journ. Ac. Nat. Sc. Phila. v. 250; ed Lec., ii, 314.

New York, Missouri and Texas; of the same form, size and color as *Aræocerus coffeæ,* but quite different by the form and position of the antennæ.

2. **B. griseus,** n. sp.

Elongate, subcylindrical, piceous, densely clothed with rather coarse gray hair, verging towards ochreous in places, but without definite pattern. Head as in *B. limbatus.* Prothorax longer than its width at base, rounded, but scarcely narrowed on the sides as far as the middle, then more obliquely rounded and narrowed to the tip, which is rounded as usual; base broadly rounded, sinuate near the hind angles, which are acute; disc strongly punctured, but the punctures are concealed by the dense pubescence. Elytra not wider than the base of the prothorax, and about twice as long as it; striæ narrow, rather finely punctured. Legs and antennæ yellowish-brown, club darker. Length 3.5 mm.; .14 inch.

Colorado, six specimens; Prof. F. H. Snow. The body is elongate as in *B. variegatus*; the pubescence is nearly uniform, but there are, sometimes, three paler gray vittæ on the prothorax, and a broad one occupying the 5th and 6th interspaces of the elytra. The side margin produced by the flexure of the basal ridge extends nearly one-half of the length of the prothorax.

3. **B. limbatus** Say, ibid. v, 250 (*Anthribus*); ed. Lec., ii, 314.

Atlantic States, varies in size from 2.2–3.1 mm.; .09–.12 inch.

4. **B. plumbeus**, n. sp.

Oblong, cylindrical, black, densely clothed with cinerous pubescence, not mottled; striæ of elytra fine, punctured; antennæ and legs testaceous, club and thighs darker. Length 3.2 mm., .13 inch.

Middle States. Of the same form as *B. limbatus*, but a little narrower; the pubescence is finer, of a uniform gray color. The posterior ridge extends only one-third the length of the prothorax at the sides, while in *B. limbatus* it goes fully as far as the middle.

5. **B. vestitus**, n. sp.

Oblong-cylindrical, black, densely clothed with coarser brownish-yellow pubescence, scarcely mottled striæ of elytra punctured, interspaces flat; antennæ and legs testaceous. Length 2 mm.; .08 inch.

Louisiana; Mr. Ulke. Smaller and narrower than *B. limbatus*, densely covered in the same manner with coarse, brownish-yellow pubescence; the hind angles of the prothorax are acute; but the transverse ridge scarcely extends along the sides in front of the base.

6. **B. tomentosus** Say, Journ. Ac. Nat. Sc. Phila. v. 251 (*Anthribus*); ed. Lec., ii, 315. *Brachytarsus brevis* Fahræus, Sch. Curc. v, 168.

Middle and Western States; on *Ambrosia* (C. V. Riley). The ridge extends from the hind angles about one-third the length of the prothorax.

7. **B. variegatus** Say, Journ. Ac. Nat. Sc. Phila. v, 251 (*Anthribus*); ed. Lec., ii, 315; *Brachytarsus sticticus* Gyll., Sch. Curc. i, 172.

Atlantic States; Say notes its occurrence in the smut of wheat. A species of rather elongate form, and easily known by the basal and postmedial fuscous spots near the suture: varieties however occur in which these spots are obsolete, and the specimens are then to be distinguished from *A. limbatus* by the narrower form, and more elongate prothorax. Such specimens probably represent *B. obsoletus* Fahraeus, Sch. Curc. v, 167. The ridge extends from the base along the sides for about one-half the length.

ANTHRIBULUS n. g.

The small species upon which I have founded this genus is of more elongate form than *Brachytarsus*, but agrees with it in the trapezoidal form of beak, and the first joint of the tarsi not longer than the second. It differs, however, by the basal ridge of the prothorax being not rectangularly but only obtusely flexed at the outer ends, and not continuing along the sides. The claws are cleft at the tips for about one-fourth their length.

1. **A. rotundatus**, n. sp.

Elongate, dark brown, densely clothed with pale, cinereous and brown pubescence; prothorax broadly rounded on the sides, hind angles rounded; elytra oval, convex, striæ deep, punctured. Length 1.4–2.4 mm.; .05–.09 inch.

Massachusetts to Louisiana. This species differs in form from the *Brachytarsi* by having the sides of the prothorax broadly rounded, and the elytra slightly narrowed and rounded near the base. The body is rather elongate, proportioned nearly as in *B. variegatus*, dark brown, densely clothed with brown and silvery gray pubescence; the head is flat, and the rostrum slightly narrowed at the insertion of the antennæ; the latter are testaceous, with the club fuscous; prothorax longer than wide, gradually narrowed in front and rounded on the sides, tip rounded; base broadly rounded, transverse ridge not continued along the sides; hind angles obtuse, slightly rounded. Elytra oval, convex, a little wider than the base of the prothorax; humeral angles rounded, not prominent; striæ rather deep, punctured; legs testaceous. The antennæ are rather stouter than in *Brachytarsus*, and scarcely attain the base of the prothorax.

Tribe III. ARÆOCERINI.

But two genera of this tribe have occurred in our fauna; they are of small size, and are easily known by the antennæ being inserted in small foveæ upon the upper surface of the beak. The transverse carina of the prothorax as in the preceding tribe is basal, suddenly flexed, forming a right angle, and extended a short distance along the sides; the antennæ are slender, and the last three joints form a loose club. The elytra are regularly striate as in all the preceding tribes and groups of the family.

Antennæ with second joint shorter than the first............ **Aræocerus.**
" " " as long as the first, elytra striate. **Choragus.**

ARÆOCERUS Sch.

1. **A. fasciculatus** Wollaston, Ann. Nat. Hist. v, (1870), 18; *Curculio fasc.* DeGeer, Mem. Ins. v, (1775), 276, pl. xvi. f. 2; *Bruchus cacao* Fabr., Syst. Ent. 64; Ent. Syst. 1, 2d, 370; Syst. El. ii, 397; *Macrocephalus cacao* Oliv., Ent. iv, No. 80, 15, pl. 2, f. 21; *Anthribus coffeæ* Fabr., Syst. El. ii, 411; *Aræocerus coffeæ* Gyll., Sch. Curc. i, 175; Labr. and Imhoff, Curc. i, 55; *Anthribus capillicornis* Say, Journ. Ac. Nat. Sc. Phila. v, 249; ed. Lec., ii, 313.

Atlantic and Pacific States in articles of commerce. This cosmopolitan species has many other synonyms, which may be found in Harold and Gemminger, Cat. Col. p. 2749. From these must be excluded *Anthribus mœstus* Lec., Ann. Lyc. New York, i, 172, which, as mentioned above, belongs to *Piazocorynus*.

CHORAGUS Kirby.

1. **C. Zimmermanni**, n. sp.

Oval-subcylindrical, brown, without lustre, slightly pubescent, prothorax densely punctured, elytra deeply striato-punctate, interspaces densely and finely punctulate, antennæ and legs yellow. Length 1.3 mm.; .06 inch.

North Carolina; Dr. C. Zimmermann. According to description this species differs from the European *C. Sheppardi* by the prothorax not being very finely punctured, and from *C. piceus* by the elytra not being shining.

2. **C. Sayi**, n. sp.

Elongate-oval, subcylindrical, blackish, prothorax densely punctured, slightly pubescent, elytra deeply striato-punctate, shining, interspaces less densely and more distinctly punctulate; antennæ dark testaceous, feet piceous. Length 2.3 mm.; .09 inch.

Washington, D. C.; Mr. Ulke. Larger and narrower than the preceding, with darker legs, and shining elytra.

Tribe IV. XENORCHESTINI.

The species of this tribe have lost all appearance of the family, and indeed of Rhynchophora. The only one known to me in our fauna might be readily mistaken for a small *Cryptocephalus;* while the Maderan species figured by Wollaston* seems to resemble in miniature *Gibbium*

The body is oval or ovate, very convex, and quite glabrous. The beak is so short as to be not distinct from the front; the antennæ are inserted upon the front, which is deflexed; the eyes are small, transverse oval. The first and second joints of the antennæ are longer and stouter; 3–7 shorter and thinner, nearly equal; eighth subtriangular, a little wider, 9–11 wider forming a loose club. Prothorax narrowed from the base forwards, ridge entirely basal, flexed at the hind angles, and continuing a short distance along the sides. Scutellum invisible. Elytra not striate. Tarsi with the first joint elongated; second triangular, emarginate; third bilobed; claws slender, not toothed.

Two genera would seem to be indicated; the first of which is unknown to me in nature

Upper surface smooth.......................... XENORCHESTES.
Prothorax punctured; elytra with irregular double
rows of punctures.......................... EUXENUS.

XENORCHESTES Woll.

1. **X. americanus** Motsch., Bull. Mosc. 1873, ii, 251.

Unknown to me; found on bushes near Mobile, Alabama. The following is the description given by Motschulsky:

Statura et color *X. saltitantis* sed duplo minor; gibbosus, acariformis, antice attenuatus, nitidus glaber, niger; elytris subænescentibus, antennis pedibusque ferrugineo-testaceis; capite obtuso, oculis planiusculis; thorace antice capitis latitudine, subconico, postice latiore, basi simpliciter truncato; elytris antice thoracis latitudine, postice ovato-dilatatis. Long. ⅗ lin.; lat. elytr. ¼ lin.

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* Insecta Maderensia, pl. viii, f. 8. The maxilla has a strikingly Adephagous form, the inner lobe being curved, acute, and sparsely spinose on the inner edge.

EUXENUS n. g.

I can give no other characters for distinguishing this genus, except the punctured surface and less ovate form of body.

1. **E. punctatus** n. sp.

Oval, very convex, slightly narrower in front; brownish-black, glabrous shining; sides of elytra piceous, base of antennæ and legs testaceous. Head feebly punctulate. Prothorax a little wider at base than long, gradually narrowed from the base forwards; tip broadly rounded, base nearly rectilinear; disc deeply but not coarsely punctured. Elytra scarcely wider than the base of the prothorax, and punctured similarly, except that the punctures are arranged in irregular double rows, with narrow intervening smooth spaces. Beneath brownish, punctured; ventral segments short, equal. Length 1.2 mm.; .05 inch.

Detroit, Michigan; one specimen; Messrs. Hubbard and Schwarz. Dr. Horn has received another from Canada. The head is so much deflexed that I cannot examine the form of the mentum without risk of breaking the insect.

Family XI. APIONIDÆ.

Mentum narrow, linear, much longer than wide, inserted upon a short gular peduncle of equal width; slightly channeled at tip, reaching nearly to the mandibles, and quite concealing the ligula and palpi, which are very small, maxillæ entirely filling the buccal fissures with a large corneous mass; palpi not visible; on dissection they appear very short, with not more than three joints; there is but one broad lobe, densely fringed with hairs. Mandibles three-toothed, the middle tooth curved, acute, forming the apex; near the tip on the anterior edge is a small tooth; the third tooth is on the inner side and very large.

Antennæ inserted at the sides of the beak, in foveæ, eleven-jointed, straight, first joint longer than second; these two are stouter than the succeeding ones; 9–11 broader and longer, forming an oval pubescent club, which is pointed at the end.

Head prominent, not deflexed, not narrowed behind the eyes, which are rounded, convex, and not finely granulated; beak long and slender, sometimes stouter towards the base; without antennal grooves.

Prothorax truncate, in front, without postocular lobes, subsinuate behind, gradually narrowed from base to tip; prosternum very short, coxal cavities rounded, confluent, closed behind; prosternal sutures distinct.

Mesosternum small, narrow between the coxæ; side pieces diagonally divided; epimera triangular, pointed at the inner side, and not attaining the coxal cavities. Metasternum a little longer than the first ventral segment, side pieces narrower.

Elytra ample, sometimes almost ventricose, deeply striate, entirely covering the pygidium: without epipleuræ; fold on the inner surface parallel with the side margin, diverging gradually from it towards the tip. Wings large.

Abdomen with the first and second ventral segments large, closely connate, with a fine straight suture; third and fourth segments very short, sutures straight; fifth longer, flat, rounded at tip; dorsal segments membranous, pygidium small; anterior coxæ conical, prominent, contiguous; middle coxæ round, slightly separated; hind coxæ small, transverse, rather widely separated.

Legs rather long and stout; thighs somewhat clavate, tibiæ truncate at tip, without spurs, or spines; tarsi dilated, first point scarcely longer, third bilobed; claws divergent, appendiculate, toothed, or simple.

The species of this family are small, and have a peculiar and easily recognized appearance. Lacordaire has placed them, as a tribe near his *Attelabides*, with which, however, as will be seen by the foregoing description, they have but little resemblance, or affinity.

Lacordaire describes them as apterous; in all the species I have examined the wings are quite well developed. I also find that in many of our species the claws are toothed or appendiculate, while in a few they are simple, and I have therefore attempted to group them in my collection upon those characters, the position of the antennæ, and the relative length of the first and second joints of those organs.

The species are numerous, and many are yet undescribed. It seems hardly worth while to affix names to them, until they have been collected, with reference to the plants which they infest. I will, therefore, on the present occasion give only the bibliography of the described species, in alphabetical order, with such notes on their habits, as I have been able to obtain.

APION Herbst.

1. A. **cavifrons** Lec., Pac. R. R. Expl. and Surveys, Ins. 53. Oregon.

2. A. **cinereum** Gerstaecker, Stettin Ent. Zeitung, 1854, 250. South Carolina.

3. A. **crassinasum** Lec., Pac. R. R. Expl. and Surveys, Ins. 53, California.

4. A. **cribricolle** Lec., Pac. R. R. Expl. and Surveys, Ins. 53; *A. porosicolle*, Gemm., Col. Hefte, viii, 122. California. The change of name was suggested in the Munich Catalogue, but was afterwards withdrawn by Dr. Gemminger as unnecessary.

5. A. **cuprescens** Mann., Bull. Mosc., 1843, ii, 289. Alaska.

6. A. **lanuginosum** Walsh, Proc. Ent. Soc. Phila., 1867, 269. Illinois, from galls *Salix strobiloides* produced by a species of *Cecidomyia*.

7. A. **melanarium** Gerst., Stett. Ent. Zeit., 1854, 261.

8. A. **metallicum** Gerst., ibid. 243. Florida.

9. **A. nigrum** Herbst, Käfer, vii, 122, pl. 103, f. 11 : Germar, Magazin, ii, 239 ; Gyll., Sch. Curc. i, 254.

10. **A. nodirostre** Gerst., Stett. Ent. Zeit., 1854, 241. Florida.

11. **A. œdorhynchum** Lec., Pr. Ac. Nat. Sc., Phila., 1858, 78. San Diego, California.

12. **A. pensylvanicum** Boh., Sch. Curc, v, 417. Pennsylvania.

13. **A. porcatum** Boh., ibid. v, 374.

14. **A. proclive** Lec., Pac. R. R. Expl. and Surveys, Ins. 53. California.

15. **A. protensum** Lec., ibid. 53. California.

16. **A. reconditum** Gyll., Sch. Curc. v, 432. Pennsylvania.

17. **A. rostrum** Say, Journ. Acad. Nat. Sc. Phila., v; 253 ; ed. Lec., ii, 316 ; Curc. p.6; ed. Lec., i, 264 ; *A. Sayi*, Gyll., Sch. Curc. i, 252; Harris, Inj. Insects, ed. ult. (larva.) Seeds of *Baptisia leucantha.*

18. **A. segnipes** Say, Curc. p. 6 ; ed. Lec., i, 264. Seeds of *Tephrosia virginica.* Also in seeds of *Astragalus* according to Say.

19. **A. subglobosum** Gerst., Stett. Ent. Zeit., 1854, 243.

20. **A. troglodytes** Mann., Bull. Mosc., 1843, ii, 289. California.

21. **A. ventricosum** Lec., Proc. Acad. Nat. Sc. 1858, 78. Fort Yuma, California.

22. **A. vile** Gerst., Stett. Ent. Zeit., 1854, 249.

Species are known to me to infest the seeds of *Baptisia tinctoria, Phaseolus pauciflorus;* and in the Adirondack region of New York, I found a species in abundance on the leaves of the locust, *Robinia pseudacacia.* Say, on the authority of Dr. J. F. Melsheimer, mentions that *A. rostrum* is found on the same plant : Curc. p. 6, but the species collected by me is quite different.

APPENDIX I.

ADDITIONS AND CORRECTIONS.

p. 2. add; Pubescence long and sparse, head very convex, eyes protuberant.......................... **4. bombifrons.**

4. Rhinomacer bombifrons, n. sp.

Of the same form as *R. pilosus*, but larger, black, with a slight metallic tinge, thinly pubescent with long but not coarse gray hair. Beak wider at base and tip, narrowest about the middle, slightly curved, smooth above, punctured at the sides, separated from the head by a very deep constriction. Head nearly twice as wide as long, very convex, coarsely and densely punctured; eyes very convex and prominent. Prothorax a little wider than long, rounded on the sides, strongly punctured, with a slight vestige of a smooth dorsal line. Elytra strongly, but not densely punctured, more finely punctured towards the tip. Antennæ piceous, 3–7 joints paler. Length 4 mm.; .16 inch.

British Columbia, one specimen. The head is also convex in *R. pilosus* and *comptus*; but to a much less extent; the other characters are quite different and the elytra are much less densely punctured.

p. 4. Change the table of *Auletes*, at follows:

Antennæ inserted near the middle of the beak. **2.**
" " " " base " " **3.**
2. Last joint of antennæ triangular pointed, as wide as the preceding; black coarsely punctured, thinly pubescent.............................. **1. ater.**
Last joint of antennæ narrower than the preceding, obtuse; black finely punctured, thinly pubescent. **nasalis.**
3. Bluish black, densely punctured, thinly pubescent, **2. subcœruleus.**
Very small, brown, irregularly pubescent.......... **3. cassandræ.**

1–2. Auletes nasalis. n. sp.

Shining black, sparsely clothed with fine suberect hairs, beak nearly as long as the head and prothorax, rather broad, narrowest at the base of the antennæ, which are inserted in large lateral cavities, about ⅓ from the base; gradually wider towards the tip, scarcely punctured, with a longitudinal row of punctures each side from the tip nearly to the antennæ. Head transverse, punctured, with a smooth frontal space; eyes prominent. Prothorax wider than long, narrowed in front, rounded on the sides, not densely, but strongly punctured. Elytra rather densely and finely punctured. Antennæ black, 9th and 10th joints large, not transverse, 11th much smaller and narrower, triangular with rounded angles. Length 3 mm.; .12 inch.

California, west of San Diego; collected by Mr. Hardy and kindly given me by Dr. Sharp. The 9th and 10th joints of the antennæ are transverse and the 11th longer and acute at tip in *A. ater:* and nearly the same in *A. subcæruleus:* in *A. cassandræ* the last joint is more obtuse, and the club is rather less loosely formed.

p. 7. Change the table of *Rhynchites* as follows :

5. Color black bronzed.............................. 2. **æneus.**
" blue .... 3. **mexicanus.**
" golden, tinged with green................... **eximius.**

3–4. **Rhynchites eximius**, n. sp.

Bright golden, tinged with green and red, clothed with erect black hairs, which are shorter than in the two species above named, beak as long as the head and prothorax, slightly broader at tip, rather stout, slightly curved, rugose, bisulcate and feebly carinate behind the antennæ; lateral edges sharply defined; an elongate fovea between the antennæ. Head finely transversely rugose behind, sparsely and strongly punctured in front, not channeled. Prothorax about as wide as long, somewhat narrowed in front, rounded on the sides, sparsely and strongly punctured; tip constricted at the sides, base distinctly margined. Elytra nearly one-half wider than the prothorax, striæ composed of deep punctures, which are not much larger than those of the interspaces. Under surface, legs and beak, dark metallic green. Antennæ black, inserted about the middle of the length of the beak and extending beyond the base of the elytra. Length 3.7 mm.; .15 inch.

New Mexico, Dr. Horn. A very distinct species.

p. 96. **Phacepholis elegans.** I have three specimens from New Mexico, agreeing in all respects with the others, except that the scales are dirty gray, not at all metallic.

p. 80. **Dirotognathus sordidus.** Specimens collected by Mr. Crotch, at Lake Labache, British Columbia, are of smaller size (3–2 mm.; .125 inch), and the prothorax is somewhat broader than in the Mohave and Arizona specimens, but do not differ otherwise.

p. 114. in table of *Sitones*, add in 3 :

Elytra nearly uniform gray-brown, form less elongate, bristles longer; prothorax with three paler stripes..... **hispidulus.**

4–5. **Sitones hispidulus** Germ., Sch. Curc. ii. 123; Allard, Ann. Ent. Fr., 1864, 376; *S. hæmorrhoidalis*, Sch., Curc. ii. 115.

This common European species occurred abundantly at the sea-shore near Long Branch, New Jersey, in July, about the roots of grass growing on the dunes. It is easily known by the long bristles of the elytra, which in our specimens are only slightly variegated in color.

p. 119, to table of *Trichalophus* add :

Beak, channeled................................ 5. **simplex.**
Beak flat, not at all channeled..................... 6. **planirostris.**

6. **Trichalophus planirostris**, n. sp.

Brownish-black, clothed with pale brown prostrate hairs. Beak not channeled, but flat, or even feebly concave longitudinally; lateral grooves in front of the eyes triangular, feeble, short. Prothorax rounded on the sides, not constricted at tip, convex finely and densely punctured, with a very faint narrow dorsal line, with a paler lateral stripe, as in *T. simplex*. Elytra densely and finely punctured, without striæ, but tesselated in the usual manner with darker spots. Length 8.6 mm.; .33 inch.

Colorado; one specimen kindly sent to me by Prof. F. H. Snow, by whom it was collected while in charge of the Kansas University Scientific Expedition of 1876. This species exactly resembles *T. simplex*, except in the absence of the well marked medial groove on the upper surface of the beak.

p. 124, to end of table of *Phytonomus* add in 5:

Scales golden-yellow, elytra with conspicuous black spots,
sides of prothorax rounded.......................... **eximius.**

4–5. Phytonomus eximius, n. sp.

Of the same size and form as *P. comptus*, black, prothorax and elytra densely clothed with golden-yellow scales, elytra with many small quadrate spots of black scales. Head and beak densely punctured, scales dense upon the occiput, gradually thinner in front, so that the beak becomes free from scales, but sparsely pilose with long bristles; frontal groove very short between the eyes, which are not prominent.

Prothorax as long as wide, truncate at tip, broadly rounded at base, sides parallel for half the length, then obliquely narrowed to the tip, which is impressed on the sides, but not on the upper surface; there are two ill-defined approximate basal black spots. Scutellum yellow, scaly. Elytra fully one-half wider than the prothorax, humeri oblique, obtusely angulated; sides parallel for two-thirds the length, then obliquely rounded to the tip; striæ fine, well marked, distinctly punctured, interspaces flat, without rows of bristles, under surface covered with paler scales, legs black, thinly clothed with pale hairs, thighs with a spot of pale scales. The antennæ are black and extend to the base of the prothorax; the first joint of funicle large, conical, as long as the three following united; 2–7 equal in length, but increasing rapidly in breadth, and united not longer than the club, which is elongate-oval and pointed at tip. Length 4.5 mm.; .18 inch.

Topeka, Kansas; Mr. E A. Popenoe. I have seen two specimens of this very pretty species, one of which has been kindly placed in my collection. It differs from *P. comptus* not only by the color but by the first joint of the funicle being large and the second not longer than the following; the funicle is also thicker and the club larger than in that species.

The scales in this species are deeply cleft almost to the base. Since the printing of that part of this memoir which relates to the present genus, I have examined more closely the scales of the different species in our fauna with the following result:

A. Scales thick, truncate, or very feebly emarginate at tip, with the angles not prominent.

a. Scales scarcely striate, nearly uniform; *comptus*, *eximius*.

b. Scales distinctly striate, with longer narrow ones intermixed, which are the bristles of the elytral interspaces. These bristles are obtuse in *quadricollis*, but acute in the European *rumicis*.

B. Scales elongate, striate, truncate and slightly emarginate at tip, *opimus*.

C. Scales elongate, striate, acutely and deeply emarginate at tip, with the angles acute prolonged; *setigerus*. In the European *Pollux* the scales are less deeply emarginate. The bristles are similarly striate, but longer and acute.

D. Scales narrow, cleft, with slender, acute lobes; bristles longer, acute and simple.

a. Scales cleft for two-thirds the length, *pubicollis*.

b. Scales cleft nearly to the base; *elongatus*, *Castor*.

E. Pubescent, without intermixed scales, *nigrirostris*.

It is apparent therefore, that valuable characters may be found for the recognition of the species in this difficult genus, by the study of the form of the scales.

p. 155 add:

1. **Lixus pleuralis** Lec., Pr. Ac. Nat. Sc. Phila., 1858, 78.

This species has a slender form, and is clothed with rather coarse grayish pubescence, with a stripe of paler color at the sides of the prothorax and elytra. The beak is cylindrical, rather stout, about twice as long as the head, punctured, carinate for one-half its length, without fovea between the antennæ; frontal groove short, deep, antennæ inserted one-fourth from the tip, black; funicle stout, first joint but little longer than the second, which is scarcely longer than the third. Prothorax one-third longer than wide, gradually narrowed from the base forwards, sides straight; punctures large, shallow, approximate, disc longitudinally broadly and somewhat deeply excavated towards the base; medial angle produced, obtusely rounded. Scutellum not visible. Elytra a little wider than the prothorax, sides rounded near the base, then converging behind, tips separately slightly prolonged, and acuminate; striæ composed of distant punctures, mostly concealed by the coarse pubescence. Length 7.6 mm.; .30 inch.

Arizona and Lower California. This species is as slender as *L. rubellus*, but the tips of the elytra are only slightly prolonged, and the other characters are quite different.

I neglected to mention that the third joint of the tarsi in *L. pleuralis* and *texanus* is much less broadly dilated, and the lobes are less obtusely rounded than in the species of division C. The lobes therefore envelop more closely the base of the fourth joint, thus showing a transition from *Cleonus* to *Lixus*, which would probably warrant the separation of these species as a distinct genus.

The first part of the table might be modified to indicate this difference, which is better than the characters I have used on p. 154.

Tarsi with the third joint less broadly dilated; cushions narrow, imperfect on the first and second joints.. 2.
C. Tarsi with the third joint very broadly dilated and more deeply bilobed; cushions of under surface complete 3.
2. A. Beak cylindrical, carinate for part of the length:
Body very elongate, sides of prothorax straight, elytra acuminate at tip; pubescence coarse and dense...... 1. **pleuralis.**
Body less slender, pubescence short and fine, with longer hairs intermixed, scutellum distinct, tips of elytra acutely rounded............................ **mixtus.**
B. Beak stouter, less cylindrical, very indistinctly carinate.. 4.

1–2. **Lixus mixtus**, n. sp.

Elongate, not very slender, black, pruinose with very fine short gray pubescence, with longer suberect hairs intermixed. Beak rather stout, cylindrical, finely but strongly punctured, with a short longitudinal groove between the antennæ, and a deep frontal fovea; between these points it is distinctly carinate; thinly pubescent, with suberect hair, nearly naked at the tip. Head punctulate, with scattered larger punctures which extend upon the basal part of the beak; antennæ inserted one-third from the tip, black, funicle as in *L. pleuralis.* Prothorax scarcely longer than wide, narrowed from the base forward and rounded at the sides, convex, bisinuate at base, medial lobe broad, prolonged, obtusely angulated; disc densely punctulate, with large shallow punctures not densely placed; vaguely and broadly longitudinally impressed from the middle to the base: there is a broad lateral stripe, and two indistinct dorsal ones of denser gray hair. Scutellum small, but distinct. Elytra separately rounded at the base, the curvature being continued to the sides, so that the humeral angles are indistinct, sides parallel, rounded behind; tips separately acutely rounded, with a small tuft of hair which gives them the appearance of being subacuminate; broadly impressed near the base, which causes the basal margin to become obtusely elevated; striæ composed of distant round punctures; sides with a broad stripe of denser pubescence. Beneath clothed with gray pubescence, coarsely and sparsely punctured. Length 10 mm.; .40 inch.

Colorado, one specimen, which I owe to the kindness of Mr. B. D. Smith. At first sight this species greatly resembles *L. placidus* (p. 159), but the characters are very different.

p. 154 in tables of *Lixus* modify No. 11 as follows:
11. Scutellar angle of prothorax very obtuse.......... 11′.
" " " produced, acute, basal excavation small, deep....................... **fossus.**
11′. Prothorax with shallower punctures....... ...... 8. **punctinasus.**
" " few deep " ; (smaller).... 9. **parcus.**

7–8. **Lixus fossus**, n. sp.

Black, pruinose with cinereous very short hair, and mottled with small spots of longer whitish hair. Head and beak as in *L. punctinasus*, densely rather finely punctured; beak as long as the prothorax, rather stout, channeled between the antennæ, then obsoletely carinate to the frontal fovea; thinly pubescent. Prothorax a little longer than wide, gradually narrowed from base to tip, very feebly rounded on the sides, base slightly oblique each side, medial angle prolonged, acute; disc densely rugosely punctulate, with scattered larger punctures; basal excavation small and deep. Elytra scarcely wider than the base of the prothorax, but slightly rounded near the base; tips separately acutely rounded; basal impressions shallow, striæ composed of distant round punctures. Antennæ brown, inserted one-third from the tip. Length 8.5 mm.; .35 inch.

Enterprise, Florida, one specimen; Messrs. Hubbard and Schwarz. Easily known by the small deep prothoracic excavation and the acute scutellar lobe.

Another specimen from Florida agrees in form and sculpture, but differs by the beak more finely punctured, or rather punctulate, shining, and very slightly pubescent. The basal excavation of the prothorax is larger, less deep and vaguely channeled; the medial angle is equally acute and prolonged. The elytra are separately but more obtusely rounded at tip. I think this is the ♀ corresponding to the ♂ above described.

p. 158, in next to last line dele *L. calandroides* as a synonym of *Lixus musculus*, and add on page 153:

12. **Cleonus calandroides**; *Lixus cal.* Randall, Bost. Journ. Nat. Hist. ii, 42.

Massachusetts. By the kindness of Mr. E. P. Austin, two specimens of this species were recently sent to me. On examination I found to my great surprise, that it is a species of *Cleonus* closely allied to *vittatus* and *sparsus*, but differing by the beak more finely punctured, and the elytra clothed with uniform, finer, gray pubescence. The antennæ are much stouter than in *Lixus*, and the first and second joints of the hind tarsi are not spongy beneath. Length 9.5 mm.; .375 inch.

p. 176. The last paragraph under 1. *Endalus setosus* belongs to 3. *E. limatulus*.

p. 192, add.

2. **Magdalis subtinctus**, n. sp.

Black, subopaque, elytra with a blue reflection. Beak shining, sparsely punctured, head opaque, sparsely and finely punctured. Prothorax coarsely and densely punctured, about as wide as long, angle near the tip acute prominent, sides then sinuate to the basal angles which are acute and prominent. Elytra convex, gradually slightly wider behind, striæ strongly punctured, interspaces very finely and densely rugose, almost alutaceous. Thighs with a small acute tooth, claws distinctly toothed near the base. Length 4 mm.; .15 inch.

California, found by Mr. Crotch at Gilroy; related to *M. gracilis*, but the eyes are smaller and more flat, and the sides of the prothorax more broadly sinuate behind the postapical angle, widest at the middle, and the hind angles are prolonged.

3. **Magdalis hispoides**, n. sp.

Elongate, cuneiform, deep black, somewhat shining, beak as long as the prothorax, slightly curved, strongly, but not densely punctured; head similarly punctured, eyes large, slightly convex. Antennæ inserted above the middle of the beak. Prothorax a little longer than wide, narrowed from the base forward, sides nearly straight, not toothed, slightly constricted near the tip; hind angles not produced; disc densely, moderately, coarsely punctured. Elytra with striæ not impressed, but composed of approximate quadrate punctures; interspaces as wide as the striæ, each with a row of well marked approximate punctures, thighs not toothed, claws simple. Length 3. 5 mm.; .14 inch.

British Columbia, one specimen, Mr. Crotch. Resembles a small narrow *Microrhopala* in appearance.

4. **Magdalis gentilis**, n. sp.

Elongate, black, with a bluish tinge on the elytra, beak as long as the prothorax, curved, finely punctured. Head opaque, sparsely punctulate, antennæ inserted about the middle of the beak. Prothorax a little longer than wide, sides parallel from the base for nearly one half the length, then rounded to the tip, which is tubularly constricted; hind angles not produced; disc densely, but not coarsely punctured. Elytra with striæ composed of approximate punctures, interspaces feebly convex, wider than the striæ, subopaque, finely reticulate, and marked with small rugose punctures. Thighs armed with a large acute tooth, claws not toothed. Length 4 mm.; .16 inch.

California, two specimens found at Lake Tahoe, by Mr. Crotch. Resembles in appearance *M. subtinctus* and *gracilis*, but differs by the form of the prothorax, and the simple claws.

p. 222. After *Notolomus bicolor* add.

1–2. **Notolomus myricæ**, n. sp.

Of the same size, form and color as the large form of *N. bicolor*, but the beak is more strongly and densely punctured. The prothorax is very finely, almost imperceptibly pubescent, more coarsely punctured, with the sides and two small apical spots testaceous: the lateral cusp is prominent as in *N. bicolor*. Elytra with striæ composed of larger punctures; the dark markings are very distinct, and quite different in pattern: there is a cloudy and ill-defined spot behind the scutellum: then an oblique band formed by elongate spots on the 2d, 4th, 6th and 8th interspaces; then a large apical blotch, occupying one-half the surface, with an oblique anterior outline, parallel with the oblique band; the pale color extends into this blotch along the 4th interspace for some distance; this dark blotch includes some small spots of lighter brown, and is also paler at the sides, along which it extends. Antennæ with the 2d joint of the funicle longer than the 3d. Length 2.1 mm.; .08 inch.

New Smyrna, Florida: one ♂ kindly sent me by Mr. E. A. Schwarz, who informs me that it is found on a species of myrtle, and is very rare.

p. 225. Modify the table of *Conotrachelus* as follows :

2. Prothorax not sulcate, usually carinate :........................... I.

(A. Beak rather stout, curved, thighs bidentate............ .....

B. Beak slender, very long, thighs unidentate...................

C. Beak rather stout, curved, thighs unidentate)................

Division I,—A will remain as defined, but in p. 229 to *C. nivosus* must be added as a synonym *C. plagiatus*, p. 233, which is only a poorly developed ♂ in which the denticle of the thighs has almost become obsolete, thus causing them to appear unidentate.

Division I,—B will contain the species in *a* and *b* of the table, on p. 229 ; viz.: *cratœgi, adspersus, similis, naso,* and

11–12. **Conotrachelus Belfragei**, n. sp.

Of the same form as *C. similis*, but much smaller; brown, clothed with brown and fulvous pubescent with a very large white spot each side of the prothorax, and another saddle-shaped one behind the middle of the elytra. Head densely clothed with fulvous pubescence; beak half as long as the body, slender, very slightly curved, shining, sparsely punctured, substriate and more coarsely punctured on the sides near the base, antennæ inserted about the middle. Prothorax wider than long, sides nearly parallel from the base for one-half the length; then rounded and obliquely narrowed to the tip; disc densely and coarsely punctured, with a few white hairs on the medial line, and a very large spot of white pubescence extending from the sides over two-thirds of the surface; this spot has two narrow prolongations, the anterior one oblique and reaching the apex, the other transverse, nearly attaining the median line. Elytra one-half wider than the prothorax at base, humeri slightly oblique, angulated, but not dentate, sides converging behind from the humeral angles; striæ composed of very large and deep quadrate foveæ, almost contiguous, except where separated by elevated crests, of which the 3d interspace has one near the base, a very large one about the middle, and a smaller one behind the middle ; the 5th, 7th and 9th interspaces are narrow and carinate, and on the 8th there is a small tubercle near the tip, clothed with white hair; there are besides two short lines of white pubescence at the base of each elytron. Under surface densely punctured, abdomen with three rows of white spots. Thighs with a broad white ring, and a large acute tooth. Length 4 mm.; .16 inch.

Texas, one specimen, Mr. Belfrage.

p. 247 to 2. *Pseudomus sedentarius* add.

A specimen was collected at Enterprise, Florida, and kindly sent me by Mr. E. A. Schwarz. It differs from *P. truncatus* not only by the thighs being unarmed, and by the elytral spot not being narrowed at the tip, but also by the form of body which is elongate and subfusiform, while in *P. truncatus* it is much stouter, with the prothorax broader than long, and much more narrowed in front. The prothorax and elytra are marked with several small spots of mixed yellow and white scales. Length 4.3 mm.; .17 inch.

p. 289. *Aulobaris anthracina,* transfer to *Pseudobaris* p. 297 and add.

The examination of a second specimen in better condition shows that the claws are approximate and connate at base. It is therefore to be placed next to *P. nigrinus*, which has the pectoral groove deeper and more sharply defined than in the other species of *Pseudobaris*. I observe a few white scales at the base of the third interspace, which represent the more conspicuous spot seen in the others.

1–2 **Pseudobaris pectoralis**, n. sp.

Black, not very shining, oval, subelongate. Beak as long as the prothorax, cylindrical, not stout, coarsely punctured on the sides, more sparsely and more finely above, separated from the head by a distinct constriction; head with a few small scattered punctures. Prothorax as wide at base as the length, rapidly obliquely narrowed in front, scarcely rounded on the sides, moderately constricted near the tip; base with the scutellar lobe broad and obtusely rounded; disc coarsely punctured, more densely and somewhat confluently at the sides; dorsal line indistinct. Elytra with deep, indistinctly punctured striæ; interspaces a little wider than the striæ, each with a single row of large, deep punctures. Beneath coarsely punctured; punctures becoming smaller, but not more distant upon the abdomen. Prosternum with a broad, deep groove in front of the coxæ, limited by parallel acute ridges; claws small, connate at base. Length 4.4 mm.; .175 inch.

New Smyrna, Florida; one specimen, Mr. E. A. Schwarz. This species is related to *P. anthracina*, but differs by the prothorax more obliquely narrowed in front, and less rounded on the sides, and by the deep punctures of the interspaces of the elytra.

p. 298. Change *P. angusta* to *angustula*; the former name being preoccupied in *Baris*. The pectoral groove is deep and sharply defined as in *P. nigrina*.

p. 303, add.

2. **Stethobaris corpulentus**, n. sp.

Larger, broader and more convex than *S. tubulatus*, shining black. Beak long, curved, not very slender, sparsely, finely punctured above, more coarsely at the sides, separated from the head by an indistinct constriction; head sparsely and finely punctured. Prothorax much broader than long, very much rounded on the sides, and narrowed in front, strongly tubularly constricted near the tip; disc sparsely and not coarsely punctured; basal lobe broad, short, truncate. Elytra gradually wider for a short distance, and forming an obtuse angle with the rounded sides of the prothorax, then obliquely narrowed and rounded, entirely covering the pygidium; striæ very deep, impunctured; interspaces wider than the striæ, with a few scarcely perceptible punctures. Beneath coarsely punctured; third and fourth ventral segments with a single transverse row of punctures; fifth densely, more finely punctured. Prosternum with a broad groove, distinctly limited by acute ridges. Length 3.4 mm.; .13 inch.

Tampa, Florida; one specimen, Mr. E. A. Schwarz.

p. 303. The table of *Microcholus* should read:

Prothorax punctured; constriction near the tip.

Elytra deeply striate.. .... 1. **striatus.**
" finely striate............................ 2. **puncticollis.**
Prothorax smooth, constriction much deeper and distant from the tip.................................. 3. **lævicollis.**

p. 308, make the following changes in the table of *Centrinus*, division C:

8. Prothorax very densely punctured; scales yellowish... 20. **falsus.**
" less " " .... 8′.
8′. Pubescence white, scale-like........................ **canus.**
" yellowish, fine and capillary............ 21. **longulus.**

20–21. **Centrinus canus**, n. sp.

Elongate, rather depressed, black, shining, tolerably densely clothed with small, whitish scales. Beak as long as the head and prothorax, slender, slightly curved, smooth and polished, punctured only at the base. Head finely punctured, frontal impression distinct. Prothorax scarcely longer than wide, gradually slightly narrowed from the base for more than half the length, then rounded, and more suddenly narrowed to the tip, where it is feebly constricted; strongly and rather densely, but not confluently punctured, with a narrow, smooth dorsal line. Elytra a little wider near the base, then very slightly narrowed; conjointly rounded at tip, striæ deep, interspaces flat, rugosely punctulate, with the scales not arranged in rows. Prosternum transversely impressed as usual, and longitudinally concave; apical part with a small fovea; hind margin not emarginate; front coxæ widely separated; fifth ventral segment longer than the fourth. Funicle of antennæ slender; first joint as long as the second and third united; second twice as long as the third. Length 4.7 mm.; .18 inch.

Enterprise, Florida; one specimen, Mr. E. A. Schwarz.

On p. 317, add.

2. **Centrinus strigatus**, n. sp.

Elongate, parallel, brownish black, thinly pubescent with yellowish hairs. Beak cylindrical, rather slender, curved, as long as the head and prothorax, dark brown, shining, sparsely and finely punctured. Head sparsely punctulate. Prothorax scarcely wider than long; sides nearly parallel for half the length, then rounded and obliquely narrowed to the tip, which is strongly constricted; surface deeply, coarsely and confluently punctured; the intervals between the punctures form longitudinal plicæ, as in *Onychobaris rugicollis*, but finer; medial line smoothly elevated, extending nearly to the tip and base. Elytra not at all wider than the base of the prothorax, parallel on the sides for two-thirds the length, then obliquely narrowed to the tips, which are very broadly conjointly rounded, and seem almost truncate, though the pygidium is entirely concealed; striæ deep, finely punctured; interspaces a little wider than the striæ, with single rows of deep punctures, which bear small, reclinate yellow hairs. Beneath strongly punctured. Prosternum deeply, transversely impressed, not foveate; front coxæ widely separated; metathoracic episterna narrower than usual; fifth ventral segment as long as the third and fourth united. Antennæ with the first joint of the funicle elongate; second not longer than the third. Length 4.3 mm.; .17 inch.

Colorado; one specimen, Mr. B. D. Smith. This remarkable species does not seem related to any other in our fauna by form or sculpture.

p. 318, add.

3. Zygobaris? convexus, n. sp.

Less robust, but more convex, shining black (sparsely clothed with white scales?) Beak slender, slightly curved, as long as head and prothorax, punctured towards the base, smooth towards the tip; basal transverse impression distinct. Head sparsely punctulate. Prothorax not wider than long, much rounded on the sides, narrowed and constricted in front, deeply and coarsely punctured, with a smooth, dorsal line, and an indistinct smooth space each side half way towards the sides. Elytra suddenly wider at base than the prothorax; humeri obtusely rounded, sides converging behind; striæ deep, impunctured, interspaces a little wider than the striæ, flat, each with a single row of very small punctures, which probably bore white scales. Beneath strongly punctured, thinly pubescent, prosternum flat, not transversely impressed nor foveate; front coxæ not very widely separated. Funicle of antennæ stout; first joint elongate; second not longer than third. Length 2.4 mm.; .10 inch.

Enterprise, Florida; one specimen, Mr E. A. Schwarz. The scales have been removed by abrasion, and only a few remain near the base of the elytra, and the sides and base of the prothorax. The apical constriction of the prothorax does not continue across the prosternum as in the other species, and as in all *Centrinus* known to me, but disappears in the apical margin. thus leaving the front part of the prosternum flat. This should probably be considered a generic difference, but I am unwilling to separate it without having better preserved specimens for study. The claws seem to be very small, but hardly connate at base.

p. 319, add.

2. Barilepton lineare, n. sp.

Elongate, black, clothed with small, dirt-colored scales, which on the elytra are scarcely wider than long, obovate, and broadly subtruncate. Beak stouter than *B. filiforme*, and more coarsely punctured at base. Prothorax densely and deeply, though not very coarsely punctured, with a narrow, smooth, dorsal line. Elytra a little wider than the prothorax at the base, striate and punctured as in *B. filiforme*. Length 3.8 mm.; .15 inch.

Sumter County, Florida; one specimen, Messrs. Hubbard and Schwarz. Differs from *B. filiforme* by the larger size, the punctuation of the prothorax and the form of the scales of the elytra; the elytra are also evidently, though but slightly wider than the base of the prothorax, and the sides of the latter are suddenly rounded in front of the middle.

3. Barilepton cribricolle, n. sp.

Of the same size and form as *B. lineare*, but clothed with elongate, white scales, which form white lateral vittæ on the prothorax, and discoidal lines on the elytra. Black, beak stout, curved, punctured at base, smooth towards the tip. Prothorax more coarsely but less densely punctured, almost cribrate, sides nearly parallel, rounded behind and obliquely narrowed in front of the middle; dorsal line distinct. Elytra suddenly and more distinctly wider than the prothorax at base; striæ narrow, deep, impunctured, interspaces more strongly punctured, white scales denser on the second interval for four-fifths the length; upon the fourth there is a short basal line, then a long line extending from one-fourth of the length to three quarters; on the sixth a basal line extending to one-fourth of the length. Beneath strongly punctured, thinly clothed with white scales, metathoracic episterna and spots on third, fourth and fifth ventral segments densely scaly; the scales are also gradually more dense on the sides of the first and second ventral segments. Length 3.8 mm.; .15 inch.

Enterprise, Florida; one specimen, Mr. E. A. Schwarz.

4. **Barilepton quadricolle**, n. sp.

Very narrow, linear, black, clothed with elongate small whitish scales, beak less stout, punctured at base, smooth at tip. Prothorax as long as wide, sides parallel behind, suddenly rounded and narrowed in front of the middle; strongly and rather densely punctured; dorsal line smooth, distinct, scales more dense at the sides. Elytra suddenly a little wider than the base of the prothorax; striæ narrow, deep, impunctured, interspaces finely punctured, beneath strongly punctured, thinly clothed with small whitish scales. Length 3.2 mm.; .13 inch.

Nebraska, one specimen; given me by Mr. Ulke. I confounded this species with *B. filiforme*, which it resembles in the form of the prothorax, but differs by the stronger punctuation and by the elytra being distinctly wider than the prothorax just behind the base; the scales are also whiter and larger, and the elytral striæ are deeper.

These four species may therefore be distinguished as follows:

Body very narrow, filiform, elytra not wider at base than the prothorax, which is densely but not deeply punctured, scales very small, gray, denser at the sides of prothorax and elytra	**1. filiforme.**
Body very narrow, prothorax strongly and densely punctured, suddenly narrowed in front, scales of elytra oval, whitish, not very small	**4. quadricolle.**
Body linear, but less narrow, prothorax densely, less coarsely punctured; elytra a little wider than the prothorax at base, scales very small, rounded, yellow-gray	**2. lineare.**
Body as in *lineare*, but the elytra are more conspicuously wider near the base, and the scales are elongate, white, and form stripes; prothorax more coarsely punctured	**3. cribricolle.**

p. 330. in *Rhynchophorini* add:

A specimen of the well-known *Rhynchophorus palmarum* was collected by Mr. Hardy, in Southern California, west of San Diego, and kindly sent to me by Dr. David Sharp. As groves of palm trees are known at several places on the eastern slope of the Sierra in that region, it is not surprising that they should be depredated on by this species, which is widely diffused through the Antilles and tropical America.

Quid? Rhynchophorus noxius Gyll. Sch iv, 821. Perhaps an imported specimen of *R. palmarum*.

p. 331. Add the three following new species of *Sphenophorus;* the first belongs to Horn's group IV; the others to V; Proc. Am. Phil. Soc. xiii, 412.

Sphenophorus velutinus, n. sp.

Elongate, brownish black, entirely opaque and velvety in lustre. Beak shorter than the prothorax, curved, somewhat compressed, smooth; antennæ inserted immediately in front of the eyes. Prothorax more than one-half longer than wide, oval, strongly tubulate in front; the elevations are very vague and ill defined, the impressions are marked with shallow punctures; sides more densely and more deeply punctured; dorsal line narrow, slightly elevated, extending nearly to the base and apical constriction. Elytra not longer than the prothorax, narrowed behind from near the base; striæ very fine, marked with a few distant small punctures; two outer striæ with more numerous larger punctures; interspaces flat, obsoletely punctulate. Pygidium with a few large deep punctures, beneath sparsely punctured. Front and middle tarsi with the third joint broadly dilated, spongy each side beneath; third joint of hind tarsi slightly dilated, not wider than long. Length 11 mm.; .43 inch.

One specimen, Florida. Very different from all others in our fauna.

Sphenophorus variolosus, n. sp.

Of the same general form as *S. arizonensis*, black, somewhat shining; beak shorter than the prothorax, slightly curved, strongly punctured at base, nearly smooth at tip, which is moderately compressed. Antennæ inserted immediately in front of the eyes; head finely and sparsely punctured with a large frontal fovea prolonged anteriorly in a channel which extends as far as the beginning of the narrow part of the beak. Prothorax oblong, longer than wide, sides strongly rounded in front, and tubulate at the apex; impressions and elevations very vague, indicated by the presence of larger punctures in the places where the impressions should be, and of finer punctures on the elevations; there is a group of large punctures just behind the tubular constriction, and behind these punctures there is a smooth dorsal line extending nearly to the base. Elytra with fine deeply impressed striæ, along which are placed at irregular intervals very large shallow pits, through which the striæ run, producing a very curious appearance; interspaces finely sparsely punctulate, not elevated; the punctures of the outer striæ are smaller and deeper; those of the next are quadrate and confluent. Pygidium coarsely punctured; beneath shining, sparsely punctured; more coarsely on the 5th ventral, which is impressed near the tip; flanks of prothorax and middle of abdomen nearly smooth. Third joint of tarsi scarsely broader than second, glabrous beneath, fringed only at the sides. Length 9.7 mm.; .38 inch.

Colorado, one specimen, Mr. B. D. Smith. The presence of the postapical group of large punctures on the prothorax affiliates this species to *C. placidus*, which however it does not otherwise resemble.

Sphenophorus oblitus, n. sp.

Of the same general form as *S. placidus*, black, covered with a dirt-colored crust. Beak two-thirds the length of the prothorax, stout, slightly curved, more strongly compressed at tip; punctured at base, smooth at tip; frontal groove deeply excavated, extending to the base of the narrow part of the beak. Antennæ inserted just in front of the eyes. Prothorax more than one-half wider than long, sides parallel for two-thirds the length, then gradually and obliquely narrowed to the tip, which is less strongly tubulate than usual; surface covered with large, shallow punctures, with the depressions very feebly indicated: the punctures just behind the constriction are a little denser at the middle, representing thereby the small impression which is distinct in *S placidus*, and nearly obsolete in *S. variolosus*; there is no smooth dorsal line. Elytra with fine striæ, very feebly punctured; interspaces with single rows of very fine punctures, alternately a little wider and more elevated. Pygidium sparsely and deeply punctured. Beneath coarsely punctured on the flanks of the prothorax; punctures smaller and distant at the middle of the abdomen; fifth ventral sparsely and very deeply cribrate. Thighs sparsely and rather feebly punctured; front tibiæ distinctly sinuate on the inner side, but not angulate; tarsi with the third joint not dilated, glabrous beneath, fringed only at the sides. Length 9.6 mm.; .38 inch.

Texas; one specimen, Mr. G. W. Belfrage. This is also to be placed near *placidus*, to which it has but little resemblance. It also shows a tendency towards the *compressirostris* form, in which, however, the beak is not curved, and the front tibiæ are strongly angulated on the inner side.

Sphenophorus cariosus Oliv., Ent. v, 83, 91, pl. 28, 415; Horn, Pr. Am. Phil. Soc. 1873, 420, cum. synon.

Dr. Horn has suggested to me that this species and *S. callosus* Oliv., should be united. After careful examination of the specimens in my collection, I think this view is correct. Those who are inclined to adopt it will place *callosus* as the synonym, since it is represented by old and abraded specimens.

Sphenophorus sculptilis Uhler, Proc. Acad. Nat. Sc. Phil. 1855, 416; Horn, l. c. 424.

With this species should be united as a synonym *S. Zeæ* Walsh, Practical Entomologist, ii, 117; Riley, Missouri Ent. Report, iii (1871), 59, fig. 22.

p. 331 add the following new genus:

TRICHISCHIUS n. g.

This genus is founded upon one species, which agrees with *Sphenophorus*, except in the following characters:

The inner side of the front and middle coxæ and the middle of the metasternum and the first and second ventral segments are clothed with long hair; the thighs beneath, and the tibiæ on the inner side are fringed with long hair; the genital segment of the ♂ projects (as in *Rhynchophorus*) and is fringed with hair at the tip. The third joint of all the tarsi is slender, not at all dilated or emarginate, glabrous beneath, fringed at the sides, and quite as long as the second joint, which is equal to the first.

The prothorax is uniformly punctured, without impressions, but with a narrow, smooth dorsal line, and the elytral striæ are deep and crenate; the interspaces are even, and scarcely punctulate.

1. **T. crenatus**, n. sp.

Black, subopaque. Beak scarcely more than half the length of the prothorax, slender, slightly curved, finely punctured, with a very fine longitudinal impressed line near the base, which terminates in a small, frontal fovea. Prothorax nearly one-half wider than long, narrowed in front of the middle, and rounded on the sides, tubularly constricted near the tip; base nearly truncate with the edge acute, and sparsely fringed with yellow hairs; disc rather densely but not coarsely punctured, more coarsely towards the base, each side of the medial line, where it is feebly impressed; dorsal line narrow, very distinct, slightly elevated near the base. Elytra at base a little wider than the prothorax, basal angles slightly projecting forwards; striæ deep, crenate, interspaces nearly flat, scarcely perceptibly punctulate; humeri reddish; pygidium with the hind part strongly, rather densely punctured; apex (♂) declivous, smooth, concave; genital plate prominent, smooth. Beneath shining, strongly but not densely punctured; punctures larger on the metasternum; side pieces narrow, parallel; prosternum very narrow between the coxæ. Length 8.8 mm.; .35 inch.

Colorado; one specimen, Mr. B. D. Smith.

p. 365, add as a synonym to

Tomicus pini; *T. pallipes* Sturm, Cat. 1826, p. 76; *T. dentatus* Sturm, ibid. pl. iv, f. 30. Say's name has priority by one year.

p. 357, add as a synonym to

Xyloterus bivitatus; *Apate rufitarsis* Kirby, Fauna Bor. Am. iv, 193.

p. 337, after *Gononotus* add

HIMATIUM Woll.

I would refer to this genus, which is fully described by Mr. Wollaston in Trans. Ent. Soc., London; 1868, 461, a small slender reddish-brown opaque Cossonide, thinly clothed with coarse hair.

It has all the characters given in the description, except that the hairs are not long, and the antennæ are not very pilose and the surface not shining. The more important ones may be recapitulated as follows:

Body narrow, linear, rather flat, sparsely pubescent. Beak parallel, cylindrical, separated from the front by a distinct impression ; eyes rather large, transverse, coarsely granulated, situated on the sides and under surface of the head, not visible from above. Antennæ inserted about the middle of the beak, short and stout, scape attaining the eyes ; funicle first joint large, 2–7 very short, closely connected, club small, oval, shining, sparsely hairy, annulated only at the tip. Metasternum rather long; front coxæ widely separated, the others still more distant; tibiæ with the terminal hook very large ; tarsi rather short, third joint but little wider, somewhat bilobed.

The genus has thus far occurred only in Malabar, and *Pholidonotus*, which immediately follows it, is found in Borneo. It appears, therefore, to be a third instance of that remarkable distribution which I have previously mentioned in the Heteromerous genera *Othnius* and *Ischalia*.

1. **H. errans** n. sp.

Very elongate, reddish-brown, nearly opaque, thinly clothed with coarse yellowish hair. Beak a little shorter than the prothorax, rugosely punctured, transversely impressed at the base. Head finely punctured. Prothorax more than one-half longer than wide ; widest near the base, sides suddenly rounded behind the widest part, but gradually obliquely narrowed in front and nearly straight; slightly constricted near the tip ; disc rather flat, densely and coarsely punctured, without impressions or dorsal line. Elytra not wider than the widest part of the prothorax, truncate at base, scutellum not visible, sides parallel, rounded at tip ; striæ deep and broad, punctures large, quadrate, interspaces very narrow. Body beneath very coarsely punctured; punctures of ventral segments not smaller. Length 2 mm.; .08 inch.

District of Columbia ; collected by Mr. Ulke. I owe a specimen of this interesting species to the kindness of Dr. Horn.

APPENDIX II.

UNRECOGNIZED SPECIES.

1. **Rhynchites virdiæneus** Randall, Bost. Journ. Nat. Hist., ii, 23.

R. corpore elongato viridi-æneo; capite subnigro, dense punctulato; rostro dilatato, supra utrinque sulcato; thorace æneo, dense et profunde punctulato; elytris viridi-æneis, seriebus vagis punctulatis; pedibus piceis.

Body elongated, brassy. Head darker, profoundly punctured; front somewhat depressed; rostrum dilated, especially at tip, which presents a tubercle on each side, an impressed line nearly the whole length on each side. Thorax brassy, densely and profoundly punctured. Elytra greenish brassy, with profound punctures disposed in irregular lines; feet inclining to piceous. Length about three-twentieths of an inch. Occured at Augusta (Maine), June. Perhaps allied to the *R. æratus* of Say, but the elytra of that insect are described as crenate-striate.

2. **Rhynchites congrua** Walker, Nat. in British Columbia by J. K. Lord, ii, 331.

Nigricante cyanea, aspere punctata; rostro thoracis longitudine, thoracis lateribus convexis; elytris latis, lateribus sub-convexis.

Blackish blue, roughly punctured. Rostrum as long as the thorax, slightly dilated towards the tip. Thorax narrowed in front, sides convex. Elytra much broader than the thorax and about twice its length; sides slightly convex. Length 3 lines.

Rhynchites humeralis Boh., Eugenies Resa, Ins. 117.

Oblongo-ovatus, modice convexus, niger tenuiter pubescens; antennis tibiisque ferrugineis; prothorace confertissime punctulato, lateribus parum ampliato; elytris crebre punctato-striatis, macula humerali rufo-testacea ornatis. Long, 2 mm.; lat. $1\frac{1}{4}$ mm.

Var. *a*: elytris rufo-ferrugineis dorso infuscatis.

If this species properly belongs to our fauna, it will be readily recognized without the aid of the long description which accompanies the above diagnosis.

3. **Polydrosus americanus** Gyll., Sch. Curc. ii, 136.

"Oblongus, niger, opacus, cinereo-squamulosus, fuscoque pubescens; antennis tibiis tarsisque ferrugineis; thorace pulvinato, confertim punctato; elytris punctato-striatis, apice acuminatis, in dorso plagiatim nigro-variegatis. America borealis, ex musæo Dom. Com. Mannerheim, ad describendum, amice communicatus.

Parvus: *Sitona lineello* minor. Caput majusculum, subquadratum, supra planum, confertim punctulatum, nigrum, sat dense cinereo-squamulosum; oculi semi-globosi, nigro brunnei; rostrum capite paulo brevius et angustius, crassum, porrectum, angulatum, supra planum, anterius obsolete canaliculatum, punctatum, nigrum, squamulosum. Antennæ longiusculæ, ferrugineæ, parce pilosæ. Thorax parvus, angustus, latitudine fere longior, basi apiceque truncatus, intra apicem late et profunde transversim impressus, margine alte elevato ; lateribus parum ampliatus, supra convexus, pulvinatus, confertim punctatus, niger, sat dense cinereo-squamulosus et fusco-pubescens. Scutellum parvum, rotundatum, nigrum. Elytra antice truncata, thoracis basi duplo latiora, humeris elevatis, fere rectangulatis ; lateribus non ampliata, posterius attenuata, apice conjunctim acuminata, thorace quintuplo longiora, supra in dorso antico parum convexa, punctato-striata, interstitiis planis, subtiliter alutaceis ; nigra, fusco-pubescentia, squamulis cinereo-albidis, inæqualiter vestita, relictis nempe in dorso plagis variis difformibus, nudis, nigris. Corpus subtus punctatum, nigrum, densus cinereo-squamulosum. Pedes mediocres, ferruginei, femoribus clavatis, muticis, extrorsum nigro-piceis."

Dr. Horn thinks that it may be *Cyphomimus dorsalis*. If it be not referable to that species it is unknown to us, and renewed examination of the type will be necessary to confirm the correctness of the generic position.

4. **Barynotus granulatus** Say, Curc. 12 ; Lec , ed. i, 273.

Brown, thorax obtusely granulated, with a pale vitta.

Inhabits Indiana. Body dull brown, with short raised hairs ; head impressed between the eyes. Thorax with very obtuse granulations, a longitudinal, slender, impressed dorsal line in a dull yellowish vitta. Elytra a little elevated on the basal edge ; striæ concave, much dilated, punctured ; punctures wide, not very deeply impressed, interstitial lines not so wide as the striæ, with hairs ; suture a little pale. Length about one-fourth of an inch.

The surface of the thorax exhibits the appearance of obtuse little elevated granulations, and the profile view shows irregular punctures or interrupted rugæ.

5. **Byrsopages carinatus** Motsch., Schrenk's Reisen, Amur. Ins. 168.

Closely allied to *B. ventricosus* Motsch., ibid., and distinguished only by the gray fasciculated pubescence which clothes the elytra, causing them to appear spotted ; by very slightly elevated ridges, which seem to replace the striæ of the elytra, and by the head more strongly punctured ; the latter is reddish, as are also the antennæ and legs ; the teeth and the spines at the tip of the tibæ are longer and more distinct ; the under surface of the body redder and less glabrous ; punctuation not dense but very obvious, and pubescence more developed. Length 4 lines.

I have condensed this translation from the remarks in the work cited. The genus is unknown to me and is placed by Lacordaire near *Homalorhinus*.

6. **Leposoma californica** Motsch., Bull. Mosc. 1845, ii, 105.

Elongato-ovata, convexa, punctatissima, pilosa, brunnea, fusco-cinereo squamosa ; antennis tarsisque testaceo-rufis ; elytris punctato-striatis. Long. 2½ lin ; lat. 1 lin.

California. Neither the generic nor specific description permits its identification.

7. **Phytonomus trivittatus** Say, Curc. 12 ; ed. Lec., i, 273.

Blackish brown, with numerous scale-like hairs.

Inhabits North-west Territory. Body blackish brown, with numerous robust hairs almost resembling scales, which are longer in three yellowish metallic thoracic vittæ, of which the lateral ones are broader and terminate in a spot on the humerus; the vittæ and spot are pale brownish cinereous ; antennæ rufous ; elytra with large costal spots, interstital lines obsoletely alternating with blackish and pale brown cinereous. Thighs beneath near the tip emarginate ; anterior tibiæ a little incurved at tip. Length one-fifth of an inch.

8. **Hylobius stupidus** Boh., Sch. Curc. i, 339.

Oblongus, niger, opacus, antennis pedibusque nigro-piceis, capite crebre rugoso, thorace subtiliter rugoso-punctato, carinato, elytris obsolete punctato-striatis, interstitiis confertim granulatis.

Habitat in Georgia, Americes septentrionalis. Dom. Hooker ; Mus. Schh. Magnitudo fere *H. pineti*, sed minus convexus. Caput magnum, crassum, supra convexum, nigrum obscurum, crebre ruguloso-exasperatum ; oculi oblongi, depressi, obscure brunnei ; rostrum capite dimidio longius et angustius, deflexum, crassum, parum arcuatum versus apicem nonnihil ampliatum, nigrum opacum, crebre rugoso-punctatum, carinula media obsoleta notatum. Antennæ capite cum rostro fere breviores, paulo pone medium rostri insertæ, crassæ, nigro-piceæ, griseo-pilosæ, clava ovata, acuminata. Thorax latitudine media multo longior, apice truncatus, anterius nonnihil angustior, coarctatus, lateribus in medio nonnihil rotundato-ampliatus, basi leviter sub-bisinuatus, supra parum convexus ; totus niger opacus, crebre sed non profunde rugulosus, pilis rigidis depressis flavescentibus, parce adspersus, in medio dorsi carinula abbreviata, sat distincta. Scutellum subtriangulare nigrum opacum. Elytra basi subtruncata antice thoracis basi paulo latiora, et illo triplo longiora, humeris antrorsum prominulis, obtuse angulatis, lateribus inflexa, pone humeros nonnihil ampliata, dein apicem versus sensim angustata, apice ipso conjunctim obtuse rotundata, ante apicem callo vel gibbere notata ; supra modice convexa, nigra opaca, striis parum profundis, angustis, obsolete punctatis, pulvere cinereo repletis exarata, interstitiis latis planis, confertissime subtiliter granulatis, setulis brevissimis pallidis depressis parce adspersa. Corpus subtus nigrum obscurum, setulis flavescentibus discretis adspersum, pectore fortius, ventre tenue punctulatis. Pedes longiusculi, validi, nigro-picei, flavescenti pilosi ; femoribus incrassatis, remote punctatis, omnibus dente crasso valido acuminato armatis ; tibiis subcompressis, rude rugoso-punctatis, intus ante medium ampliatis, subdentatis apice uncinatis ; tarsis elongatis dilutius piceis, subtus fulvo-spongiosis.

9. **Hylobius assimilis** Boh., Sch. Curc. ii, 345.

Oblongus, niger, capite profunde remote punctato, rostro obsolete carinato, thorace angustiore, antice valde coarctato, punctato-rugoso, linea media lævi, elytris dorso fere planis, punctis oblongis striatis, interstitiis undique granulato-rugosis.

Habitat in America boreali, a Com. Dejean missus. Mus. Schh.

Statura fere *H. palis*, sed nonnihil major, capite remote punctato, thorace angustiore, ut et defectu signaturis elytrorum, ab illo mox distinctus. Caput breve, rotundatum, nigrum, sat profunde minus crebre punctatum; fronte foveola obsoleta impressa; oculi laterales oblongi, transversi, depressi, brunnei; rostrum longitudine thoracis, crassiusculum, teres, parum arcuatum, nigrum subnitidum, a basi ultra medium obsolete carinatum, inter antennas canalicula abbreviata insculptum, totum profunde, minus crebre rugoso-punctatum. Antennæ longe pone medium rostri insertæ, thorace paulo longiores, crassiusculæ nigro-piceæ, clava ovata subobtusa cinereo-pubescente. Thorax latitudine multo longiore, antice valde angustatus, coarctatus, lateribus paululum rotundatus, basi sub-bisinuatus, supra minus convexus, niger profunde rugoso-punctatus, in medio obsolete carinatus. Scutellum parvum, rotundatum, nigrum pallido-pubescens. Elytra antice thoracis basi paulo latiora, et quadruplo longiora, humeris subprominulis, rotundatis, lateribus inflexa, ultra medium linearia, tum apicem versus angustata, apice conjunctim obtuse rotundata, supra parum convexa dorso fere plana; tota nigra subopaca, striis minus latis, crebre cancellatis, exarata, quarum foveolæ oblongo-quadratæ, sat profundæ.

10. **Lixus præpotens** Boh., Sch. Curc. iii, 62. *Rhynchophorus præp.* Say, Curc. 21; ed. Lec., i, 287.

Thorax with three vittæ.

Inhabits Arkansas. Body black, covered with dense prostrate cinereous hairs. Rostrum shorter than the head and thorax; thorax with three black vittae, extended behind at the scutel. Elytra with double series of punctures; a black vitta on the middle of each, and a narrower subsutural one. Length more than three-fifths of an inch. This is a fine insect.

11. **Lixus poricollis** Mann., Bull. Mosc. 1843, ii, 291.

Oblongus, niger, pubi grisea dense obtectus, rostro breviore recto carinato, thorace antice parum angustiore, dorso punctis nigris remotis variolosis impresso, basis foveolato, longitudinaliter anguste carinato, utrinque nigrolineato, elytris subtiliter punctato-striatis, apice singulatum subacuminatis, fusco trilineatis, femoribus muticis. Longitude cum rostro 4–5 lin.; latitudo 1¼–1½ lin.

California; Mus. Mosq. Ad Stirpis 2dæ manip. 1mum op. cel. Schönherr, adnumerandus.

12. **Lixus modestus** Mann., ibid.

Elongatus niger, griseo-pubescens, rostro crassiusculo, modice arcuato, thorace conico breviore, dorso longitudinaliter excavato, elytris striato-punctatis, dense cinereo-squamulosis, maculis minutis albescentibus remote aspersis, apice singulatim subacuminatis, femoribus muticis. Longitudo cum rostro 5 lin.; lat. 1 1-3 lin.

California; Mus. Mosq. Stirpis 2dæ manipulo 1mo operis cel. Schönherr collocandus.

13. **Lixus marginatus** Say, Curc. 13; ed Lec., i, 275; Boh., Sch Curc. iii, 70.

Black, covered with minute cinereous hairs, thorax impressed. Elytra, region of the scutel and middle of the base indented.

Inhabits United States. Body black, covered with short minute robust recurved hairs, punctured. Antennæ rufous, club dusky. Thorax a little convex each side, behind the middle of the side rectilinear; a little contracted before with an indented line above, more profound near the base, with dilated, confluent, slightly impressed punctures, not deeply sinuated at base, with regular series of punctures. Elytra, region of the scutel indented; abdomen dull fulvous behind. Length nearly seven-twentieths of an inch.

[This species is said to occur on the lower Mississippi and in the Atlantic States. I have not identified it, nor was it known to Gyllenhal, who merely cites Say.]

14. **Tychius aratus** Say, Curc. 26 ; ed. Lec., i, 294.

Body entirely covered with pale olivaceous, dense, elongated or rounded scales ; rostrum as long as the head and thorax, linear ; scales like robust hairs ; transversely indented over the insertion of the antennæ ; a longitudinal impressed line ; tip naked rufous ; thorax with the hair-like scales converging backwards to the dorsal line. Elytra with indented striæ, punctures are not visible, with densely imbricated, rounded scales ; middle of the interstitial lines with a series of prostrate scale-like hairs ; thighs unarmed, emarginate.

Inhabits Missouri. Length three-twentieths of an inch. Can this be *C. penicellus*, Herbst?

15. **Conotrachelus confinis** Fahræus, Sch. Curc. iv, 430.

Ovalis, niger, pube grisea parce adspersus ; rostro basi superne, antennis, femoribus posterioribus medio, tibiis, tarsisque rufo-testaceis ; thorace ampliato, rugoso-punctato, linea utrinque flexuoa densius griseo-tomentosa ; elytris pone medium late griseo-fasciatis ; interstitiis alternis modice elevato-costatis, costa intima pone medium interrupta ; femoribus æqualiter bidentatis.

Pennsylvania. The long description adds little to the diagnosis, which indicates a species allied to and perhaps identical with *C. elegans*, p. 228.

16. **Rhytidisomus orobinus** Schiödte, Berl. Ent. Zeitschr. 1859, 141.

Nigro-piceus, unicolor, antennis pedibusque rufis, elytris callo humerali protuberante, interstitiis sulcorum dorsalium angustis, acute elevatis, imbricato-dentatis, lateralium latis, convexiusculis, sublævibus, singulis serie punctorum simplici impressis. Long. ¾ lin."

Greenland. I infer from the remarks appended to the diagnosis, that this species differs from the European *R. globulus* by the smaller size, as well as by the characters above given.

17. **Rhynchænus umbellæ** Fabr., Syst. El. ii, 450.

Nigricans, elytris striatis, scutello albo.

Habitat in Carolina, Mus. Dom. Bosc. Statura *R. pericarpii* at major et alius. Caput nigrum. Thorax lævis, nigricans, immaculatus. Elytra parum pallidiora, striata ; striis ante apicem coeuntibus. Scutellum album, at sutura elytrorum omnino concolor. Corpus cinereum pedibus nigris.

The description is worthless, as is indicated by the expression thorax lævis. The specimen upon which it was based, should probably be referred to *Rhinoncus pericarpius*, p. 284.

18. **Baridius californicus** Motsch., Bull. Mosc. 1845, ii, 372.

Oblongus, subdepressus, niger, punctatus, parce pilosus ; rostro longitudine thoracis, tenue, subarcuato ; thorace quadrato, antice angustato ; elytris postice subattenuatis, striatis, striis in fundo punctatis ; interstitiis subtiliter punctato-striatis. Long. 1¾ lin. ; lat. 1 lin.

Il est plus petit que le *B. picinus*, dont il se distingue facilement par les élytres faiblement pubescentes. De Californie.

19. **Baridius californicus** Boh., Eugenies Resa. Ins. 137.

Ovatus, modice convexus, nigro-piceus, nitidus glaber ; antennis pedibusque rufo-ferrugineis ; rostro ferrugeneo modice arcuato, prothorace vix longiore, hoc brevi, sat crebre punctulato, pone apicem valde rotundato-ampliato ; elytris castaneis, mediocriter punctato-striatis, punctis striarum minus crebris, interstitiis planis, lævibus. Long, 1¾ ; lat. 1¼. mill.

California, San Francisco. The detailed description gives no farther characters for the recognition of this species.

20. **Centrinus pistor** Gyll., Sch., Curc. iii, 170. Ins. Nov. 295, (*Balaninus*).

Femoribus muticis, niger, griseo-tomentosus, thorace supra scutellum producto, acuto, elytris triangularibus, striatis. Habitat in America septentrionali, (Kentucky).

B. cerasorum paullo major. Rostrum dimidii corporis longitudine, tenue, incurvum, læve, denudatum, atrum, antennæ rostri medio insertæ, piceo-nigræ, funiculi articulis 1–2 elongatis, reliquis subæqualibus, cylindricis. Thorax latitudine postica parum brevior, lateribus a basi ultra medium sensim, tunc apicem versus subito angustatis, basi subtruncatus, supra scutellum triangulariter productus, acutus, griseo aut fulvo, dense tomentosus. Scutellum rotundum tomentosum. Coleoptera triangularia, abdomine brevioria, striata, fulvo aut griseo-tomentosa. Pectus et abdomen albo-squamosa. Pedes nigri, grisco-tomentosi, femoribus parum clavatis, muticis.

The reference to *Centrinus* seems to me doubtful, in view of the expression *Coleoptera abdomine breviora.* I have seen nothing that could be properly referred to this description.

21. **Centrinus? dilectus** Harris, Trans. Hartford Soc. Nat. History 80, pl. 1, fig. 4.

Punctured, and with brassy scales ; scutel whitish, third joint of the antennæ twice as long as the fourth. Length, exclusive of the rostrum twenty-hundreths of an inch.

Halsey's collection, No. 165. Body piceous black, densely punctured, and with elongated brassy-yellow scales. Head retracted to the eyes within the thorax, indented at the base of the rostrum. Rostrum as long as the head and thorax, slender, almost filiform, arcuated, slightly dilated over the origin of the antennæ, piceous, minutely and remotely punctured. Antennæ inserted behind the middle of the rostrum, piceous, club rufous; third joint (second of the funiculus), two-thirds the length of the preceding, and twice the length of the following joint, Thorax in the middle, longitudinally elevated, or almost carinated, covered with linear-lanceolate scales, which converge from the sides towards the central carina. Elytra with acute, remotely punctured striæ, and flat interstitial lines, each one of which is covered with large superficial confluent punctures, and three or four series of linear-lanceolate scales; an oblique elevation or callus before the tip of each elytron. Body beneath more densely covered with whiter, shorter oval scales. Breast, before the anterior legs, widely indented, not canaliculate, unarmed.

22. **Balaninus porrectus** Boh., Sch. Curc. vii, 2d, 292.

Ovatus, niger, squamositate griseo-olivacea dense tectus; rostro tenui, longitudine elytrorum, subrecte; thorace angustiore. confertim punctulato, intra apicem constricto; elytris tenuiter punctato-striatis, interstitiis planis subtiliter coriaceis; femoribus anticis obsolete dentatis, posterioribus muticis.

Missouri, Americæ borealis, Dom. Say, Mus. Sch.

Balanino cerasorum vix latior, sed nonnihil longior. Caput parvum, subglobosum, subtilissime punctulatum, nigrum nitidum, glabrum; oculi subrotundati, depressi, nigri; rostrum longitudine elytrorum, tenue, cylindricum, subrectum, piceo-nigrum vix punctatum basi griseo-olivaceo-squamosum. Antennæ thoracis medium attingentes, piceæ, parce pilosæ; clava parva, ovata, subobtusa. Thorax latitudine postica fere longior, apice truncatus, anterius nonnihil angustior, intra apicem constrictus, lateribus paulo rotundato-ampliatus, basi bisinuatis, supra convexus, subtiliter crebre punctulatus, niger, squamis depressis griseo-olivaceis dense vestitus. Scutellum parvum, subtriangulare, nigrum, dense griseo-squamulosum. Elytra antice subtruncata, thoracis basi nonnihil latiora, humeris vix elevatis, obtuse rotundatis; lateribus non ampliata, apicem versus angusta'a, apice conjunctim obtuse rotundata, thorace duplo longiora, supra parum convexa, tenuiter punctato-striata, interstitiis planis, subtilissime coriaceis; nigra, squamulis depressis, griseo-olivaceis, dense vestita. Corpus subtus subtiliter crebre punctulatum, nigrum, squamulis tenuioribus, cinereo-albidis undique æqualiter obsitum. Pedes validiusculi, rufo-picei, cinero-squamulosi; femoribus clavatis, anticis obsolete dentatis, posterioribus muticis, tibiis tere-tibus, rectis.

The reference to this genus seems to me doubtful, especially as the species is immediately followed by *B. constrictus*, which has no resemblance to *Balaninus*, but is an *Erirhinine* (p. 168). It is quite possible, that this insect, on renewed study of the type in Stockholm, may prove the same as my *Desmoris scapalis*, which is congeneric with *D. constrictus*.

23. **Brenthus peregrinus** Herbst, vii, 190, pl. 108, f. 1.

This is evidently a species from Tropical America, either with an incorrect locality, or accidentally introduced. It is therefore, unnecessary to reprint the description. In the Munich Catalogue, 2713, it is cited as a synonym of *B. anchorago.* ♀

24. **Cossonus californicus** Motsch., Bull. Mosc. 1845, i, p, 99, No. 228.

"Niger, glaber, subdepressus; rostro breviori, crassiori, apice modice dilatato, basi obsolete foveolato; antennarum articolo breviori (sic); thorace oblongo, profunde punctato, medio distincte longitudinaliter biimpresso, elytris profunde punctato-striatis. Long. 2 lin.; larg. ⅔ lin."

He says that it resembles *C. piniphilus*, but is much smaller and easily recognized by the stouter and shorter antennæ, and by the two longitudinal impressions at the middle of the thorax.

25. **Pityophthorus cribripennis** Eichhoff, Berl. Ent. Zeitschr. 1868, 274.

Elongatus, cylindricus, thorace oblongo, lateribus subrectis, postice minus profunde punctato, linea media lævi; elytris ad suturam indigeste (extra striato–) punctatis, declivitate postica ad suturam utrinque sulcata, sutura subelevata, margineque laterali subtilissime granulatis, angulo apicali acutiusculo. Long. 1 lin. Patria; America septentr.

26. **Pityophthorus bisulcatus** Eichhoff, ibid. 1868, 274.

Elongatus, cylindricus, thorace oblongo-ovali lateribus subrotundatis, postice vage subtiliter punctato, linea media lævi; elytris subtilius striato-punctatis, punctis, dilatatis, interstitiis inde angustioribus subrugulosisque; declivitate postica ad suturam utrinque sulcata, sutura valde elevata margineque subcalloso subtiliter granulatis, angulo apicali acutiusculo. Long. ¾ lin. Patria: America borealis.

27. **Pityophthorus pulchellus** Eichhoff, ibid. 1868, 275.

Oblongo-elongatus, thorace breviter-ovali, postice fortiter ruguloso-punctato, linea media lævi; elytris striato-punctatis interstitiis subrugulosis; decliviate postice ad suturam utrinque sulcata, sutura subelevata margineque laterali subtiliter granulatis, angulo apicali acutiusculo. Long. ¾ lin. Patria: America septentr.

28. **Tomicus oregonis** Eichhoff, Berl. Ent. Zeitschr. 1868, 274.

Oblongus cylindricus nitidus, thorace subquadrato, postice profundius punctato; elytris subtiliter striato-punctatis, interstitiis internis basi lævibus; elytris apice oblique truncatis, truncatura excavata circulari, spatio nitido punctato, margine apicali prolatato, laterali utrinque 4-dentato, dente tertio coarctato majore, secundo valido acuto. Long, 2 lin: Amer. bor. (Oregon).

29. **Tomicus perturbatus** Eichh. l. e. 274.

Oblongus, cylindricus, subnitidus, thorace breviter ovato, postice fortiter punctato; elytris subcrenato-striatis, stria suturali profundiore pone medium fortiter ruguloso-punctata, interstitiis convexiusculis lævibus, apice oblique truncatis truncatura excavata spatio punctato nitido, margine laterali utrinque 4-dentato, dente tertio majore, a primo minimo remoto; margine apicali longe elevato. Long. 2½ lin. Amer. bor.

30. **Phlœosinus Haagi** Chapuis, Mem. Soc. Roy. Sc. Liége, 1869, 94. *Dendroctonus Haagi* Eichhoff, Berl. Ent. Zeitschr. 1868, 148.

Breviter ovatus, subopacus, piceus, nonnunquam antennis tarsis et elytris brunneis, pube brevi flava vestitus; capite crebre ruguloso-punctato, inter oculos spatio nitido, apice carinato; prothorace latitudine basis breviori, a basi ad apicem angustato, sat dense fortiter punctato, linea media angusta elevata, a basi ultra medium producta; elytris anguste striato-punctatis, striis vix punctatis, interstitiis rudibus, sat dense minute granulatis, in declivitate seriatim tuberculatis, 1mo. et 3io subconvexioribus. Long. 2½ mill.: Am. bor.

31. **Phlœosinus graniger** Chapuis, ibid. 95.

Breviter ovatus, subopacus piceus, elytris et pedibus brunneis, antennis flavis, pube brevi flava dense vestitus; capite crebre punctulato, apice carinulato; prothorace latitudine basali breviori, a basi ad apicem angustato, dense et fortiter punctato, linea media a basi ultra medium elevata, sublævi; elytris striato-punctatis, interstitiis dense granulato-rugulosis, in declivitate seriatim tuberculatis, 1mo. et 3io convexioribus, tuberculis majoribus ornatis. Long. 2 mill. Texas.

APPENDIX III.

CORRECTIONS TO THE MUNICH CATALOGUE,

2187. **Liophlœus inquinatus** Mann. is Lophalophus.

2219. **Tanymecus leucophæus** Gyll. is *T. lacaena* ♂ p. 84.

2271. **Tyloderes gemmatus** Lec. is Phymatinus.

2282. **Peritelus sellatus** Boh. is Paraptochus.

2286. **Ptochus adspersus** Boh. is Neoptochus.
Ptochus globiventris Lec. is Peritelopsis.

2287. **Ptochus saccatus** Lec. is Mylacus.

2288. **Trachyphlœus melanothrix** Kirby is Geoderces.

2289. **Trachyphlœus squalens** Lec. is Thinoxenus.

2315. **Ophryastes tessellatus** (Say) is Aramigus.

2359. **Listroderes.** Some of these are *Listronotus*, and others are *Macrops*.

2424. **Curculio tæniatus** Lec. is Plinthodes.
Curculio torpidus Lec. is Nocheles.

2435. **Grypidius vittatus** Couper, is *Sitones tibialis.*

2436. **Erirhinus ephippiatus** Say is Alyca.

2482. **Attelabus scutellaris** Say is Piazorhinus.

2496. **Balaninus constrictus** Say is Desmoris.

2502. **Anthonomus tessellatus** Walsh is Dorytomus.

2541. **Conotrachelus cristatus** Fahraeus, iv, 438; a West Indian species not known to occur in the United States.

2610. **Ceutorhynchus umbellæ** Fabr. is *pericarpius.*

5621. **Baris.** The species in my synopsis, Pr. Acad. Nat. Sc. Phila., 1868, 361, are not cited.

2650. **Sphenophorus præpotens** Say, is Lixus, as is indicated by the pubescence of the surface, (v, p. 431).

2672 & 3. **Haagi and graniger** Eich., appear under two genera, *Dendroctonus* and *Phlœosinus.*

2673. **Hylesinus aculeatus** Say, is incorrectly referred to *Dendrosinus* and *D. globosus* is placed as a synonym.

2681. **Aphanarthrum pumilum** is Dolurgus.

2695. **Scolytus muticus** Say, dele the reference to Chapuis.

2749. **Aræocerus fasciculatus. Anthribus moestus** Lec., is not a synonym of this species, but belongs to Piezocorynus.

APPENDIX IV.

The following bibliography of the memoirs relating to Economic Entomology of the Rhynchophora of the United States, has been prepared at my request by Mr. B. Pickman Mann, of Cambridge, Mass.

It will be an invaluable addition to this volume, for all who desire to study the habits of these insects: a prerequisite to any rational enquiry into the means to be adopted for the suppression of the noxious species. Such a study has been heretofore almost impracticable in this country, in consequence of the large number of undescribed species, and the scattering of the descriptions of those which have been named in a multitude of volumes, many of which can only be obtained with much labor and great cost. For the proper use of the tables, certain explanations are necessary.

I. The subjects mentioned in the articles cited are indicated as follows :

b. benefits. *d.* description. *f.* food.
h. habits. *i.* injuries. *l.* localities.
r. remedies. *s.* seasons. *t.* transformations.

II. The * after a reference indicates that the article is illustrated with a figure of the insect in question.

NAME.	WORK.	VOL.	PAGE.	SUBJECT.
abietis. Hylobius	11	5	171	f i
ampelopsidis. Madarus	3	2	105	d f i
analis. Attelabus	14		65-66*	d h s
bicolor. Rhynchites	14		66	d f i s
bipustulatus. Attelabus	14		66*	d h
" "	22	4	143-145	d f h s t
calligraphus. Tomicus	16	17	721-722	d f h i s
carbonarius. Hylastes	16	17	730	d s
caryæ. Scolytus	17	5	103-108*	d f h i l r s t
cerasi. Rhynchænus	11	2	282	d f h i l s t
" "	11	5	171	="Curculio nenuphar"
" "	11	7	81-82	d f h i r s t
" "	14		78	="Conotrachelus nenuphar"
coffeæ. Aræocerus	22	5	156	i l
cratægi. Conotrachelus	10	2	81	f
" "	10	2	120	f l
" "	17	3	35-39*	d f h i l r s t
dentatus. Hylurgus	14		87	d f h s
" "	16	17	750	d f h i
destructor. Hylesinus	11	5	169-171	f h i r
" Scolytus	11	5	169-171	
exesus. Tomicus	14		87-88	d f h i l s
fragariæ. Analcis	17	3	42-44*	d f h i l r s t
granarius. Curculio	11	4	228	r
" "	11	7	62-63	i r
" Sitophilus	3	1	179	b f i
" "	14		83	d f h i r
hilaris. Curculio	14		70*	d f s
Hylurgus spp.	11	5	171	d f i
imbricatus. Epicærus	10	2	81	f i l
" "	17	3	58*	d f i l
inæqualis. Cœliodes	3	2	52	f s
" "	17	1	128-129*	f i l s t
" "	21	1	13-21*	d f h i l r s
liminaris. Tomicus	14		88	d f s
" "	16	16	356-357	d f i s
mali. Tomicus	16	16	326-327	d f i l
materiarius. Tomicus	16	17	726-728	d f h i
minuta. Eupsalis	17	6	113-117*	l
monographus. Tomicus	3	2	207	d f h i t
nasicus. Balaninus	14		74-75	d f h s

NAME.		WORK.	VOL.	PAGE.	SUBJECT.
nenuphar.	Conotrachelus	3	1	3-4	r
"	"	3	1	11-13	f h i r s
"	"	3	1	32	f i
"	"	3	1	33	r
"	"	3	1	34-36	i l r
"	"	3	1	56	r
"	"	3	1	80	h s
"	"	3	1	92-93	f r
"	"	3	1	156	h
"	"	3	1	161	r
"	"	3	1	183	r
"	"	3	1	202-218	r
"	"	3	1	217-221	h
"	"	3	1	220-241	r
"	"	3	1	226	r
"	"	3	1	239	h i r s
"	"	3	1	244	h
"	"	3	1	252	f
"	"	3	2	53	r
"	"	3	2	56	r
"	"	3	2	119-121	h
"	"	3	2	130-137*	d f h i r s t
"	"	3	2	165	r
"	"	3	2	169-170	r
"	"	3	2	225-227	h r s
"	"	3	2	268-271	r
"	"	3	2	274	r
"	"	3	2	276	f
"	"	3	2	336	f i
"	"	3	2	338	r
"	"	10	1	6	general
"	"	10	2	29-30	general
"	"	10	2	31	f r s
"	"	10	2	71	r
"	"	10	1	74	(worthless) r
"	"	10	2	75-81	d f h i r s
"	"	10	2	97	r
"	"	10	2	114-115	h
"	"	11	2	69-70	f h i r t
"	"	11	5	405-406	f h i r s t
"	"	11	7	291	f h r s
"	"	11	8	17-18	f h i l r s
"	"	11	8	382	r
"	"	11	9	153	f r
"	"	11	9	356	f h r s
"	"	11	9	393-394	f h i r s
"	"	11	9	405	f i
"	"	11	9	413	f h r
"	"	11	10	405	h
"	"	11	10	411	i
"	"	11	11	1	h (worthless)
"	"	11	16	349	f h r t
"	"	11	16	389	i r
"	"	14		75-81*	d f h i r s t
"	"	16	16	347	f i
"	"	16	16	349-352	f h i r s t
"	"	16	16	359	f i
"	"	16	16	360	f
"	"	16	16	365	d f h i
"	"	16	16	387	f
"	"	16	16	461	f i
"	"	17	1	50-62*	f h r s
"	"	17	3	11-29*	f h l r s
"	"	21	1	64-72	d f h l r s
"	"	22	2	137-139*	f h r
"	"	22	3	12, 26*	r
"	Curculio	11	5	171	f i
noveboracensis.	Ithycerus	3	1	221-222*	d f h i l r
"	"	3	2	176-177	f h i s
"	"	3	2	246	f i
"	"	10	2	81	f i l
"	"	10	2	107	f i l r
"	"	16	16	331	d f h i s
"	"	17	3	57-58*	d f h i l

NAME.	WORK.	VOL.	PAGE.	SUBJECT.
oryzæ. Sitophilus	14		83-84*	d f h i l r s
pales. Hylobius	14		70-72*	d f h i l s
picivorus. Hylobius	16	17	731	d f h
pini. Curculio	11	5	171	f h i l
“ Tomicus	14		88*	d f i l s
“ “	16	17	722-723	d f h i
“ “	16	17	751	f h i
pinifex. Hylastes	16	17	729-730	d h
posticatus. Conotrachelus	10	2	81	f
prunicida. Anthonomus	3	1	11	f h r s
“ “	3	1	93	f
“ “	10	2	79-80	d f h l r s
“ “	17	3	39-42*	d f h i l r s
“ “	21	1	72-78	d f h i l s
pubescens. Attelabus	16	16	475-476	d f h i s
pulchellus. Sphenophorus	17	3	60*	d f h s
puncticollis. Conotrachelus	10	2	81	f i l
pusillus. Tomicus	16	17	724-726	d f h i
pyri. Scolytus	11	5	1-2*	d f h i r s t
“ “	11	5	6	f i
“ “	11	5	17-18	f i r
“ “	11	5	22	f i
“ “	11	5	25-26	f i
“ “	11	5	38	f i
“ “	11	5	38-39	f i
“ “	11	5	41	f i r
“ “	11	5	50-51	f i
“ “	11	5	113	f i
“ “	11	5	171	f i r
“ “	11	8	401	d f h i r s
“ “	11	9	6	f i
“ “	11	9	21-22	f i
“ “	11	9	35	f i
“ “	11	9	137	f i r
“ “	11	9	361	f i r
“ “	16	16	327-328	f h i
“ “	16	16	330	f h i
“ “	16	16	353-354	d f i s
“ “	16	16	360	f i s
“ Tomicus	14		88-91	d f h i l r s t
quadrigibbus. Anthonomus	3	1	36	f i
“ “	3	2	227	d
“ “	3	2	243*	d
“ “	3	2	306	f h l
“ “	10	2	80-81	d f h i l r
“ “	17	3	29-35*	d f h i l r s t
rectus. Balaninus	16	16	476-477	d f h i
robustus. Balaninus	10	2	81	f i l
sayi. Apion	14		67*	d f i
Scolytus spp.	10	2	57-58	d f
“ “	11	5	66	f i
“ “	11	5	302-303	i r
septemtrionis. Brenthus	14		67-69*	d f h i l s t
sesostris. Baridius	3	2	104-106*	d f i
strobi. Pissodes	3	2	26*	f i l r s
“ “	14		71-73*	d f h i r s
“ “	16	17	732-736*	d f h i l r s t
“ Rhynchænus	11	5	171	f i
“ Rhynchœnus	10	1	20	d f i l r s
stupidus. Hylobius	3	2	61	f
suturalis. Anthonomus	3	1	79*	f i r
“ “	12		487-488	d f h s
sycophanta. Anthonomus	3	2	46	d f h i s t
terebrans. Hylurgus	14		84-86*	d f h i s t
“ “	16	17	728-729	d f h i s
“ Scolytus	11	5	171	d
trinotatus. Baridius	3	1	22-23*	d f h i l s t
“ “	14		81-82*	d f h i l s t
“ “	17	1	93-95*	d f h i l r s t
typographus. Bostrichus	11	5	170	i l
vitis. Madarus	17	1	131-132*	d f h i s t
xylographus. Tomicus	16	17	716-721	d f h i l s t
zeæ. Sphenophorus	10	2	117-118	d! f h i l
“ “	17	3	59*	d f h i l

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Magdalinus 5 pp. No. 646.

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INDEX.

Page.

- Acalles basalis 241
  - carinatus 242
  - clathratus 242
  - clavatus 243
  - crassulus 244
  - *fasciculatus* 254
  - granosus 243
  - longulus 244
  - nobilis 241
  - nuchalis 244
  - pectoralis 245
  - *pictus* 254
  - porosus 242
  - *scabrosus* 243
  - sordidus 243
  - turbidus 242
- Acallodes ventricosus 272
- ACAMPTI 238
- Acamptus rigidus 239
- Achrastenus griseus 98
- Acmægenius hylobinus 118
- Acoptus suturalis 264
- Agasphærops nigra 25
- AGRAPHI 58
- Agraphus bellicus 59
  - *leucophæus* 59
- Agronus cinerarius 64
  - deciduus 64
- Allandrus bifasciatus 396
- Allomimus dubius 339
- *ALOPHIDÆ* 115
- *Alophus alternatus* 119
  - *constrictus* 119
  - *didymus* 119
  - *seriatus* 119
- Alyca ephippiata 209
- Amaurorhinus 341
- Amnesia alternata 52
  - decidua 52
  - decorata 50
  - elongata 53
  - granicollis 50
  - rauca 51
  - sordida 52
  - ursina 51
- Ampeloglypter ater 300
  - crenatus 300
  - Sesostris 300

Page.

- *Analcis æreus* 248
  - *foveolatus* 248
  - *fragariæ* 248
  - *morbillosus* 247
  - *variegatus* 248
- Anametis grisea 43
- Anchodemus angustus 181
  - Hubbardi 181
  - Schwarzi 182
- Anomadus obliquus 20
- ANTHONOMINI 193
- Anthonomus affinis 207
  - ater 198
  - *bisignatus* 199
  - brunnipennis 198
  - *calceatus* 210
  - canus 207
  - corvulus 201
  - cratægi 205
  - decipiens 206
  - disjunctus 204
  - elegans 202
  - elongatus 204
  - *erythropterus* 200
  - flavicornis 201
  - fulvus 197
  - gularis 197
  - hirtus 208
  - inermis 208
  - juniperinus 199
  - mixtus 206
  - morulus 201
  - musculus 200
  - nanus 207
  - nebulosus 197
  - nigrinus 201
  - nubilus 205
  - pauperculus 204
  - profundus 198
  - *prunicida* 194
  - pusillus 202
  - quadrigibbus 197
  - robustulus 205
  - rubidus 199
  - rufipennis 200
  - rufipes 204
  - *scutellaris* 194
  - scutellatus 198

Page.
Anthonomus signatus 199
squamosus. 202
subfasciatus. 205
subvittatus 203
sulcifrons 201
suturalis 200
sycophanta 200
tectus 203
tessellatus. 166
ungularis 206
ANTHRIBI 399
ANTHRIBIDÆ. 391
Anthribus *albifrons*. 404
alternatus. 405
capillicornis 407
coffeæ. 407
collaris 6
coronatus 403
cornutus 403
fascicularis 403
fasciatus 395
limbatus. 406
lividus. 403
lunatus. 404
mæstus 402
nigripennis 5
notatus 404
quadrinotatus 395
tomentosus 406
variegatus. 406
Anthribulus rotundatus. 407
Aomopactus 94
Apate bivittata. 357
brevicornis. 376
nigriceps. 375
rufipennis. 376
rufitarsis. 426
APIONIDÆ. 409
Apion 410
Aphanarthrum pumilum 387
APHRASTI 98
Aphrastus tæniatus 99
unicolor 99
Apleurus quadrivittatus. 150
Apotomus ovatus. 9
Aracanthus pallidus 110
ARÆOCERINI. 407
Aræocerus *coffeæ* 407
fasciculatus 407
Aragnomus griseus. 72
Aramigus Fulleri. 93
tesselatus 93
Arhynchus tomentosus 211
Arrhenodes septemtrionis 325
ARRHENODINI 325
ARTIPI. 91
Artipus floridanus 92

Page.
ATTELABIDÆ. 9
Attelabus analis. 10
bicolor. 7
bipustulatus 11
formicarius 327
genalis 11
hirtus 7
nigripes. 11
ovatus. 9
pubescens 11
rhois. 11
scutellaris. 210
similis. 10
Auletes ater 4
cassandræ 4
nasalis. 412
subcœruleus 5
Aulobaris anthracina. 289, 419
ibis. 289
naso. 289
scolopax 289
Bagous *æreus*. 248
americanus. 185
bituberosus. 188
californicus. 187
cavifrons 186
egenus. 183
magister 186
mammillatus. 184
nebulosus. 186
obliquus 185
planatus 185
pusillus 187
restrictus. 187
sellatus 184
simplex 183
transversus. 188
BALANINIDÆ. 322
Balaninus *constrictus* 168
porrectus 322, 434
pistor. 309
BARIDES 285
Baridius æreus 293
angustus 298
anthracinus. 289
californicus 433
californicus ‖. 433
carinulatus 292
confinis 293
densus 295
distans 296
farctus 297
ibis 289
interstitialis. 293
macer 294
mucoreus 288
nasutus 289, 314

Page.
Baridius nigrinus. 298
  ovatus 303
  penicellus. 308
  picumnus. 311
  plumbeus 288
  pubescens. 308
  pusillus 298
  quadratus 291
  scolopax 289
  scutellum-album 308
  seriatus 296
  Sesostris 300
  sparsus 293
  strenuus 290
  striatus 291
  subœneus 292
  subovalis 291
  T-signum. 299
  transversus. 291
  trinotatus 288
  tumescens. 292
  vestitus 288
  umbilicatus. 291
BARINI 284
Barilepton cribricolle 422
  filiforme 319, 422
  lineare. 422
  quadricolle. 423
Baris ærea 293
  carinulata 292
  confinis 293
  interstitialis 293
  macra. 294
  nitida. 292
  pruinosa. 294
  sparsa 293
  strenua 290
  striata 291
  subænea. 292
  subovalis 291
  transversa. 291
  tumescens. 292
  umbilicata. 291
Baropsis cribratus 259
BARYNOTI 22
Barynotus *erinaceus*. 42
  granulatus 429
  rigidus 56
  Schönherri 22
BASITROPINI 398
Bathyris dispar 109
Blastophagus piniperda 386
Borophlœus minor 338
Bostrichus affaber 361
  avulsus. 366
  cavifrons 357
  concinnus 367
Page.
Bostrichus exesus 363
  fasciatus. 348
  flavicornis. 343
  frontalis. 377, 386
  interruptus. 366
  nitidulus. 354
  parallelus 344
  pini 364, 365
  politus 358
  semicastaneus. 361
  septentrianalis. 369
  tridens. 366
  xylographus. 360
Brachybamus electus. 178
  inceratus 178
Brachycerus humeralis. 12
BRACHYDERINI 16
BRACHYPI 180
Brachystylus acutus. 91
BRACHYTARSI 404
Brachytarsus alternatus. 405
  brevis. 406
  griseus 405
  limbatus. 406
  plumbeus 406
  sticticus. 406
  tomentosus. 406
  variegatus. 406
  vestitus. 406
Brachythysus lautus. 90
BRENTHIDÆ. 323, 325
BRENTHINI 327
Brenthus *brunneus* 325
  distans 325
  formicarius 327
  lucanus 327
  maxillosus. 325
  peninsularis. 327
  peregrinus 434
  septemtrionis 325
Bruchus cacao 407
BYRSOPIDÆ. 11
Byrsopages carinatus. 429
Cactophagus validus 332
CALANDRIDÆ 328, 330
Calandra granaria. 333
  oryzæ 333
  remotepunctata 333
  sericea. 331
CALANDRINI 332
Calandrinus grandicollis. 305
CALYPTILLI 26
Calyptillus cryptops 27
Campylorhynchus tubulatus 303
Carphoborus bicristatus. 384
  bifurcus. 383
  simplex. 383

Page.
Caulophilus latinasus........ 340
CENTRINI.............. 301
Centrinus calvus.......... 314
    canus........... 421
    capillatus......... 311
    concinnus......... 316
    confinis.......... 317
    confusus.......... 316
    decipiens.......... 313
    dilectus........ 309, 433
    falsus........... 315
    griseus........... 312
    holosericeus......... 308
    lævirostris......... 309
    lineellus.......... 312
    lineicollis......... 313
    longulus.......... 316
    modestus.......... 310
    nasutus.......... 314
    neglectus.......... 310
    olivaceus.......... 311
    penicellus......... 308
    perscillus......... 310
    perscitus.......... 312
    picumnus......... 311
    pistor......... 309, 433
    prolixus.......... 317
    punctiger.......... 314
    punctirostris........ 309
    rectirostris........ 315
    scutellum-album..... 308
    striatirostris....... 309
    strigatus.......... 421
    sutor........... 311
Centrocleomus angularis...... 146
    molitor....... 146
    pilosus........ 145
    porosus....... 146
Cercopeus chrysorrhœus...... 77
CEUTORHYNCHI.......... 272
CEUTORHYNCHINI......... 267
Ceutorhynchus angulatus...... 277
    convexicollis... 276
    cretura....... 283
    decipiens..... 275
    inæqualis..... 269
    medialis..... 279
    obliquus..... 278
    puberulus..... 279
    pusillus....... 276
    pusio....... 276
    rapæ........ 274
    rudis........ 275
    semirufus..... 278
    septentrionalis... 279
    sericans....... 275
    squamatus.... 277

Page.
Ceutorhynchus subpubescens... 273
    sulcipennis.... 274
    triangularis.... 284
    tau......... 278
    Zimmermanni.. 279
Chætechus setiger.......... 78
Chætophlœus hystrix........ 382
Chalcodermus............. 236
Chlorophanus acutus.......... 91
    undulatus........ 24
Choragus Sayi............. 408
    Zimmermanni....... 408
Chramesus Chapuisii......... 375
    icoriæ.......... 375
Cimbocera pauper.......... 56
CIONINI............... 219
Cionus scophulariæ.......... 220
CLEONINI.............. 144
Cleonaspis lutulentus........ 153
Cleonopsis pulvereus......... 147
Cleonus calandroides......... 417
    canescens......... 151
    carinicollis........ 152
    collaris.......... 149
    frontalis.......... 150
    inornatus......... 149
    lutulentus......... 153
    obliquus.......... 147
    puberulus......... 151
    pulvereus.......... 147
    quadrilineatus....... 150
    sparsus........... 152
    trivittatus......... 149
    virgatus.......... 150
    vittatus........... 152
Cleogonus sedentarius....... 247
Cnemogonus epilobii......... 269
Cnesinus strigicollis........ 378
Coccotorus scutellaris........ 194
CŒLIODES.............. 268
Cœliodes acephalus.......... 270
    asper........... 270
    cruralis.......... 270
    curtus........... 270
    epilobii........... 269
    flavicaudis........ 271
    leprosus.......... 270
    nasalis.......... 271
    nebulosus......... 271
    subulirostris........ 270
    tennipes.......... 270
Cœlogaster cretura......... 283
    obscurus........ 283
    Zimmermanni...... 283
Cœlosternus hispidulus....... 258
Coleocerus dispar........... 109
    marmoratus...... 109

Page.
Compsus auricephalus 88
auriceps 88
Conotrachelus adspersus 230
affinis 228
albicinctus 226
anaglypticus 234
aratus 228
argula 227
Belfragei 419
confinis 432
cratægi 230
elegans 228
geminatus 232
juglandis 226
leucophæatus 234
naso 231
nenuphar 227
nivosus 229
plagiatus 233
retensus 227
retentus 227
seniculus 227
similis 231
tuberosus 233
posticatus 232
puncticollis 232
infector 232
cribricollis 233
fissunguis 234
erinaceus 235
hispidus 235
Copturus adspersus 262
binotatus 263
longulus 263
lunatus 263
mammillatus 262
minutus 264
nanulus 261
nanus 260
operculatus 261
quercus 263
CORTHYLI 347
Corthylomimus fasciatus 348
scutellaris 348
Corthylus punctatissimus 347
scutellaris 348
COSSONIDÆ 334
COSSONINI 337
Cossonus 338
californicus 435
dubius 339
pallidus 339
pinguis 340
subcylindricus 340
Craponius inæqualis 269
CRATOPARES 403
Cratoparis lugubris 404

Page.
Cratoparis lunatus 404
paganus 404
Cryphalus *asperulus* 350
atratulus 354
carinulatus 352
cavus 348
dentiger 349
digestus 355
hispidulus 355
nitidulus 354
pilosulus 351
puberulus 354
pubipennis 351
puncticollis 354
retusus 350
rigidus 362
robustus 362
robustus 356
striatus 356
striatulus 362
sulcatus 350
CRYPTOPLI 175
CRYPTORHYNCHI 239
CRYPTORHYNCHINI 233
Cryptorhynchus *anaglypticus* 234
apiculatus 254
aratus 228
bisignatus 251
cribricollis 233
elegans 228
fallax 253
ferratus 256
foveolatus 248
fuscatus 251
gracilis 246
luctuosus 251
misellus 251
minutissimus 254
obliquefasciatus 251
obliquus 253
oblongus 256
obtentus 253
oculatus 260
operculatus 261
parochus 251
retentus 227
tristis 255
umbrosus 253
ypsilon 253
CRYPTURGI 387
Crypturgus atomus 387
comatus 355
dissimilis 356
fasciatus 348
materiarius 350
minutissimus 351
pulicarius 353

Page.
Crypturgus *pullus*, 3[illegible]2
punctatissimus 347
CURCULIONIDÆ 112, 121
Curculio auricephalus 88
bicolor 7
cretura 283
crinitus 115
granarius 333
epilobii 269
elongatus 125
equiseti 163
fasciculatus 407
flavescens 115
hilaris 86
lacæna 84
minutus 325
nephele 223
noveboracensis 121
opalus 82
oryzæ 333
pales 140
parochus 251
penicellus 308
pericarpius 284
perscitus 312
picumnus 311
plagiatus 223
punctatulus 121
scrophulariæ 220
teter 220
tibialis 115
CYLADIDÆ 327
Cylas formicarius 327
turcipennis 327
CYPHINI 87
CYPHI 87
Cyphomimus dorsalis 105
Cyphus lautus 89
placidus 90
DERELOMINI 221
Derelomus flavicans 223
signaticollis 223
troglodytes 223
Dendroctonus *bifurcus* 383
brevicornis 386
frontalis 386
Haagii 382, 436
punctatus 385
rufipennis 385
similis 385
simplex 385
terebrans 385
valens 385
Dendrosinus globosus 379
Desmoris constrictus 168
scapalis 168
Diamimus subsericeus 46

Page.
Dichoxenus setiger 40
DIROTOGNATHINI 79
Dirotognathus sordidus 80, 412
Dolurgus pumilus 387
Dorytomus brevicollis 165
hirtus 166
hispictus 167
laticollis 164
longulus 166
luridus 165
Mannerheimii 166
mucidus 164
rufulus 165
squamosus 166
subsignatus 165
Dryocoetes affaber 361
granicollis 361
sepentrionis 361
DRYOTRIBI 335
Dryotribus mimeticus 336
DRYOPHTHORINI 335
DRYOPHTHORI 335
Dryophthorus corticalis 335
bituberculatus 335
Dyslobus *decoratus* 50
granicollis 50
segnis 41
Dysticheus insignis 73
Ecceptus minutus 264
Elassoptes 341
EMPHYASTINI 137
Emphyastes fucicola 137
Encalus decipiens 213
Endalus æratus 176
cribricollis 177
limatulus 176
ovalis 177
punctatus 177
setosus 176
EPICÆRI 18
Epicærus formidolosus 20
imbricatus 20
ERIRHININI 160
ERIRHINI 162
Erirhinus constrictus 168
ephippiatus 209
juniperinus 199
morio 163
luridus 165
rufulus 165
subsignatus 165
vestitus 166
Erycus morio 163
puncticollis 163
Eubrychius velatus 281
Euchætes echidna 320
Eucyllus vagans 74

Page.
Eudiagogus pulcher 111
    Rosenschœldii 111
Eudocimus Mannerheimii 141
Eugnamptus angustatus 5
    collaris 6
    puncticeps 6
    striatus 5
    sulcifrons 6
EUGNOMI 174
Eupagoderes argentatus 34
    decipiens 33
    desertus 34
    geminatus 35
    lucanus 34
    plumbeus 35
    speciosus 33
    sordidus 34
    varius 35
Euparius lunatus 404
    lugubris 404
    paganus 404
Eupsalis minuta 325
    maxillosa 325
Eurhoptus pyriformis 245
Eurymycter fasciatus 395
Eusphyrus Walshii 400
Euxenus punctatus 409
EVOTI 102
Evotus naso 103
EXOPHTHALMINI 100
EXOPHTHALMI 100
Falciger acephalus 270
    quadrispinosus 283
Geoderces incomptus 72
    melanothrix 71
Gnathotrichus corthyloides 350
Gononotus lutosus 337
Gonops fissunguis 398
Gonotropis gibbosus 394
Graphorhinus vadosus 19
Grypidius brunnirostris 163
    equiseti 163
    vittatus 115
Gymnetron teter 220
Hadromerus *hilaris* 86
    opalinus 85
Hexarthrum 341
Hilipus squamosus 141
    scrobiculatus 139
Himatium errans 427
Homaloxenus dentipes 338
HORMISCI 396
Hormiscus saltator 397
HORMOPINI 320
Hormops abducens 321
HORMORI 23
Hormorus undulatus 24

Page.
HYDRONOMI 182
HYLASTES 387
Hylastes cavernosus 388
    carbonarius 389
    cristatus 390
    exilis 389
    gracilis 388
    granosus 389
    granulatus 390
    longus 389
    macer 388
    nigrinus 388
    pinifex 390
    porculus 388
    porosus 388
    pumilus 387
    rufipes 390
    rugipennis 390
    salebrosus 389
    scabrosus 389
    subcostulatus 390
    tenuis 388
Hylesinus aculeatus 379
    aspericollis 380
    fasciatus 380
    hystrix 382
    imperialis 379
    nebulosus 380
    opaculus 380
    pruinosus 379
    rufipennis 376
    sericeus 380
HYLOBIINI 137
Hylobius assimilis 140, 430
    confusus 140
    pales 140
    picivorus 140
    pinicola 139
    stupidus 140, 430
    torpidus 55
HYLURGI 377
HYLURGINI 373
Hylurgops cristatus 390
    granulatus 390
    pinifex 390
    rufipes 390
    rugipennis 390
    subcostulatus 390
Hylurgus analogus 386
    dentatus 381
    obesus 385
    sericeus 380
    rufipennis 385
    rugipennis 390
Hypomolyx pinicola 139
Hypothenemus dissimilis 356
    erectus 356

Page.

- Hypothenemus hispidulus 355
  - striatus 356
- *Hypsonotus alternatus* 119
- ISCHNOCERI 393
- Ischnocerus infuscatus 393
  - *macrocerus* 393
- ITHYCERIDÆ 120
- Ithycerus *curculionoides* 121
  - noveboracensis 121
- ITHYPORI 224
- Lachnopus floridanus 101
- LÆMOSACCINI 223
- Læmosaccus plagiatus 223
- Lepidophorus lineaticollis 120
- *Lepisomus* 376
- Leposoma californica 429
- Lepyrus colon 127
  - gemellus 127
  - geminatus 127
- *Liophlœus inquinatus* 120
- *Liparus picivorus* 140
  - *sulcirostris* 31
  - *tesselatus* 93
  - *vittatus* 30
- Lissorhoptrus apiculatus 183
  - simplex 183
- *Listroderes appendiculatus* 132
  - *caudatus* 131
  - *delumbis* 136
  - *distinguendus* 129
  - *humilis* 136
  - *immundus* 136
  - *inæqualipennis* 131
  - *latiusculus* 134
  - *lineatulus* 136
  - *oregonensis* 133
  - *porcellus* 136
  - *solutus* 136
  - *sordidus* 129
  - *sparsus* 136
  - *spurcus* 136
  - *squamiger* 130
  - *teretirostris* 135
- Listronotus americanus 131
  - appendiculatus 132
  - callosus 130
  - cribricollis 134
  - caudatus 131
  - frontalis 133
  - gracilis 135
  - impressifrons 134
  - inæqualipennis 131
  - latiusculus 134
  - nebulosus 133
  - nevadicus 135
  - obliquus 129
  - oregonensis 133
- Listronotus punctiger 135
  - rotundicollis 132
  - setosus 134
  - sordidus 129
  - squamiger 130
  - sulcirostris 132
  - teretirostris 135
  - tuberosus 130
- *Lithodus humeralus* 12
  - *affinis* 12
  - *erosus* 12
  - *longior* 12
  - *morbillosus* 12
  - *rectus* 12
  - *rudis* 12
- *Litodactylus velatus* 281
- Lixellus filiformis 182
- Lixus asper 156
  - auctus 155
  - *calandroides* 158, 417
  - *californicus* 160
  - caudifer 156
  - concavus 158
  - fossus 415
  - læsicollis 160
  - *lateralis* 159
  - macer 160
  - marginatus 160, 431
  - mixtus 415
  - modestus 160, 431
  - mucidus 158
  - musculus 158
  - parcus 157
  - perforatus 159
  - placidus 159
  - pleuralis 155, 415
  - poricollis 160, 431
  - præpotens 160, 431
  - punctinasus 157
  - rectus 158
  - rubellus 155
  - scrobicollis 159
  - sylvius 156
  - terminalis 157
  - texanus 155
- Lophalophus inquinatus 120
- Macrancylus linearis 339
- *Macrocephalus albifrons* 404
  - *bimaculatus* 395
  - *cacao* 407
  - *fasciatus* 395
- Macrops delumbis 136
  - humilis 136
  - immundus 136
  - lineatulus 136
  - *maculicollis* 136
  - porcellus 136

Page.
Macrops solutus. . . 136
sparsus . . . 136
spurcus. . . 136
solutus . . . 136
vittaticollis. . . 137
Macrorhoptus estriatus. . . 209
Macrorhyncolus protractus. . . 338
Madarus *ampelopsidis* . . . 300
vitis. . . 300
undulatus. . . 301
Magdalis gentilis. . . 418
hispoides. . . 418
nephele . . . 223
subtinctus . . . 417
Meconemus *tuberculatus* . . . 393
Melamomphus niger . . . 40
Mesites subcylindricus. . . 340
Metamasius sericeus . . . 331
Miarus hispidulus. . . 221
MICRACIDES . . . 367
Micracis aculeata. . . 368
hirtella . . . 369
nanula . . . 368
rudis. . . 369
suturalis. . . 368
Micralcinus cribratus. . . 236
Microcholus lævicollis. . . 304, 420
puncticollis. . . 304
striatus. . . 304
Microhyus setiger. . . 238
Micromastus gracilis. . . 246
Mimetes setulosus . . . 45
seniculus . . . 45
Mitostylus tenuis. . . 107
Monarthrum dentigerum . . . 349
fasciatum . . . 348
mali . . . 349
scutellare . . . 348
Monius rufinasus . . . 180
MONONYCHI . . . 267
Mononychus vulpeculus. . . 268
Mylacus saccatus. . . 68
MAGDALINI. . . 192
Magdalis ænescens. . . 192
MINYOMERI . . . 17
Minyomerus innocuus. . . 18
languidus . . . 18
Nanophyes pallidulus . . . 220
Naupactus . . . 94
Nemophilus strigillatus . . . 378
Neoptochus adspersus . . . 65
Nocheles æqualis. . . 55
torpidus. . . 55
Notiophilus limatulus . . . 176
Notiodes *apiculatus* . . . 183
egenus . . . 183
limatulus . . . 176

Page.
Notiodes *nigrirostris* . . . 178
Notolomus basalis . . . 222
bicolor . . . 222
myricæ . . . 418
Odontopus *calceatus*. . . 210
OMILEI . . . 101
Omileus epicæroides . . . 102
Onychobaris cribrata . . . 296
densa. . . 295
distans . . . 296
pectorosa. . . 295
rugicollis . . . 297
seriata . . . 296
subtonsa . . . 295
Onychylis alternans . . . 179
longulus . . . 179
nigrirostris . . . 178
OPHRYASTINI. . . 27
OPHRYASTES . . . 29
Ophryastes *argentatus*. . . 34
decipiens . . . 33
latirostris. . . 31
ligatus . . . 31
porosus. . . 32
speciosus. . . 33
sordidus. . . 34
sulcirostris. . . 31
tessellatus. . . 93
tuberosus. . . 31
validus. . . 31
varius. . . 35
vittatus. . . 30
Orchestes parvicollis. . . 208
puberulus . . . 208
rufipes . . . 208
Orimodema protracta. . . 44
Orthoris Crotchii . . . 286
OTIDOCEPHALINI . . . 191
Otidocephalus dichrous . . . 191
elegantulus . . . 191, 327
OTIORHYNCHIDÆ . . . 13
OTIORHYNCHINI. . . 58
OTIORHYNCHI . . . 59
Otiorhynchus *arcticus*. . . 62
ligneus. . . 61
maurus . . . 62
monticola . . . 62
naso . . . 103
nodosus. . . 62
rugifrons. . . 61
Sayi . . . 61
sulcatus . . . 61
Pachnæus opalus . . . 82
distans. . . 83
Pachybaris porosus . . . 302
Pachylobius picivorus . . . 140
Pachyrhynchus Schönherri . . . 121

Page.
Pachytychius amœnus 168
  discoideus 169
Pandeleteius cinereus 86
  hilaris 86
  pauperculus 86
Panscopus erinaceous 42
  rufinasus 180
Paragoges maculatus 219
Paraptochus sellatus 67
  californicus 67
Pelenomus cavifrons 282
  squamosus 281
  sulcicollis 281
Peritaxia hispida 47
  rugicollis 47
Peritelopsis globiventris 70
PERITELI 65
Peritelus *bellicus* 49
  chrysorrhœus 77
  sellatus 67
Phacepholis candida 97
  elegans 96, 412
  obscura 96
Phlœophagus 341
  pallidus 339
Phlœophthorus granicollis 377
Phlœosinus cristatus 381
  dentatus 381
  graniger 382, 412
  Haagii 382, 412
  liminaris 380
  punctatus 382
  serratus 381
Phlœotribus *dubius* 377
  frontalis 377
  granicollis 377
  liminaris 377
  setulosus 377
Phœnicobius Chamæropis 401
PHYCOCŒTES 189
Phycocœtes testaceus 189
PHYLLOBIINI 103
Phyllobius calcaratus 105
Phyllotrox ferruginus 174
  nubifer 174
Phymatinus gemmatus 54
Phyrdenus undatus 249
PHYTOBII 280
Phytobius *quadrispinosus* 283
  sulcicollis 281
  velatus 281
PHYTONOMI 123
Phytonomus Castor 126
  comptus 125
  diversus 125
  elongatus 125
  eximius 414

Page.
Phytonomus nigrirostris 126
  opimus 124
  pubicollis 125
  quadricollis 126
  setigerus 125
  trivittatus 120, 430
PHYXELES 56
Phyxelis *glomerosus* 56
  rigidus 56
  setiferus 56
Piazorhinus pictus 211
  scutellaris 210
Piazurus californicus 260
  oculatus 260
  subfasciatus 260
Piezocorynus dispar 402
  mixtus 402
  mœstus 402
Pissodes affinis 143
  costatus 143
  dubius 143
  fasciatus 143
  macellus 140
  nemorensis 142
  rotundatus 143
  squamosus 141
  strobi 142
Pityophthorus asperulus 350
  bisulcatus 352, 435
  cariniceps 353
  carinulatus 352
  confinis 354
  cribripennis . . . 354, 435
  comatus 355
  digestus 355
  fossifrons 353
  infans 355
  lautus 354
  materiarius 350
  minutissimus . . . 351
  nitidulus 354
  pilosulus 351
  puberulus 354
  pubipennis 351
  pulchellus . . . 352, 435
  pulicarius 353
  pullus 352
  puncticollis 354
  retusus 350
PLATYPODIDÆ 342
Platypus *Blanchardi* 344
  compositus 344
  disciporus 343
  flavicornis 343
  parallelus 344
  perfossus 344
  punctulatus 344

Page.

- Platypus quadridentatus 344
  - *rugosus* 344
  - rugulosus 344
  - *tremiferus* 344
- Plinthodes tæniatus 118
- Plinthus carinatus 139
- Plocamus hispidulus......... 320
- Plocetes ulmi 213
- Pnigodes setosus 189
- Polydrosus americanus..... 106, 428
  - *elegans* 106
- POLYGRAPHI............. 374
- Polygraphus rufipennis 376
  - *paginatus*........ 376
- Pseudobaris albilatus........ 298
  - angusta 298, 420
  - angustula 420
  - anthracina 420
  - farcta 297
  - nigrina 298
  - pectoralis 420
  - pusilla.......... 298
  - T-signum 299
- Pseudomus sedentarius 247, 419
  - truncatus........ 246
- PRIONOMERINI........... 210
- Prionomerus calceatus........ 210
  - *carbonarius*...... 210
- Procas picipes 162
- Proctorus armatus 212
- PROMECOPINI........... 108
- *PTEROCOLIDÆ*........... 9
- Pterocolus ovatus 9
- *Pterocyclon longulum* 349
  - *similes* 348
- *Ptochus adspersus*.......... 65
  - *globiventris* 70
  - *saccatus* 68
  - *tesselatus*.......... 65
- *Rhina frontalis* 334
  - *plagiata*........... 223
- *RHINIDÆ*............. 333
- *RHINOMACERIDÆ* 1
- Rhinomacer bombifrons 412
  - comptus........ 2
  - elongatus....... 2
  - pilosus 2
- Rhinoncus longulus.......... 284
  - pericarpius 284
  - pyrrhopus........ 284
- *Rhinosimus collaris* 6
  - *nigripennis* 5
- RHIGOPSES.............. 36
- Rhigopsis effracta.......... 37
- Rhodobænus pustulosus....... 332
  - 13-punctatus 332
- *Rhopalopleurus Lecontei*....... 375

Page.

- Rhoptobaris canescens....... 287
- *Rhynchænus argula*.......... 227
  - *brunnirostris* 163
  - *caudatus*........ 131
  - *cerasi* 227
  - *constrictus*........ 168
  - *epilobii*......... 269
  - *equiseti*........ 163
  - *interstitialis* 293
  - *lemnæ* 178
  - *nenuphar* 227
  - *nigrirostris*....... 126
  - *pallidulus* 220
  - *strobi* 142
  - *teter* 220
  - *umbellæ* 432
  - *undulatus* 301
  - *velatus*......... 281
  - *vulpeculus*........ 268
- Rhynchites æneus 7
  - æratus......... 9
  - *angustatus*....... 5
  - aureus......... 8
  - bicolor......... 7
  - *collaris*......... 6
  - congrua 428
  - *curculionoides*..... 121
  - cyanellus 8
  - eximius......... 413
  - fossifrons 8
  - glastinus........ 7
  - hirtus 7
  - humeralis........ 428
  - mexicanus 7
  - *nigripennis*....... 5
  - planifrons........ 8
  - *ruficollis* 6
  - viridiæneus....... 428
- *RHYNCHITIDÆ*........... 3, 4
- RHYNCHOPHORINI 33
- Rhynchophorus cruentatus 33
  - palmarum 424
  - *præpotens*.... 160, 431
  - *oryzæ* 333
- RHYNCOLINI............ 340
- Rhyncolus 341
  - *latinasus*........ 340
  - *protractus*........ 338
- Rhypodes dilatatus 75
  - brevicollis........ 76
- Rhyssematus 236
- Rhytidisomus orobinus 432
- Scierus annectens.......... 391
- Sciopithes obscurus......... 63
- *SCOLYTIDÆ*.......... 341, 345
- SCOLYTINI............. 370
- Scolytus californicus 372

Page.

- Scolytus *caryæ* . . . 371
  - fagi . . . 372
  - *flavicornis* . . . 343
  - *frontalis* . . . 377
  - muticus . . . 372
  - *muticus* . . . 371
  - præceps . . . 373
  - *pyri* . . . 360
  - *quadridentatus* . . . 344
  - quadrispinosus . . . 371
  - subscaber . . . 373
  - sulcatus . . . 373
  - *terebrans* . . . 385
  - unispinosus . . . 372
  - ventralis . . . 373
- Scyphophorus acupunctatus . . . 331
  - *robustior* . . . 331
  - yuccæ . . . 331
- Scythropus californicus . . . 107
  - elegans . . . 106
- Sibynes fulvus . . . 219
- *SITONIDÆ* . . . 113
- Sitones californicus . . . 114
  - crinitus . . . 115
  - flavescens . . . 115
  - *hæmorrhoidalis* . . . 412
  - hispidulus . . . 412
  - *indifferens* . . . 114
  - *lepidus* . . . 115
  - lineellus . . . 114
  - *octopunctatus* . . . 115
  - *scissifrons* . . . 114
  - *seniculus* . . . 115
  - sordidus . . . 114
  - tibialis . . . 115
  - vittatus . . . 114
- *Sitophilus granarius* . . . 333
  - *oryzæ* . . . 333
  - *remotepunctatus* . . . 333
- Smicronyx cinereus . . . 173
  - corniculatus . . . 173
  - corpulentus . . . 170
  - flavicans . . . 171
  - fulvus . . . 172
  - griseus . . . 171
  - obtectus . . . 171
  - ovipennis . . . 170
  - pusio . . . 171
  - seriatus . . . 172
  - squamulatus . . . 173
  - sordidus . . . 173
  - tychoides . . . 171
  - vestitus . . . 172
- SPHENOPHORINI . . . 330
- Sphenophorus *callosus* . . . 425
  - cariosus . . . 425
  - oblitus . . . 425

Page.

- Sphenophorus *procerus* . . . 332
  - *pustulosus* . . . 332
  - scuptilis . . . 425
  - *sericeus* . . . 331
  - *13-punctatus* . . . 332
  - *validus* . . . 332
  - variolosus . . . 424
  - velutinus . . . 424
  - *zeæ* . . . 425
- Stenomimus pallidus . . . 339
- Stephanocleonus cristatus . . . 147
  - plumbeus . . . 146
- *Stephanoderes Chapuisii* . . . 356
  - *seriatus* . . . 356
- STENOPELMI . . . 179
- Stenopelmus rufinasus . . . 180
- Stenoscelis . . . 341
- Stethobaris corpulenta . . . 420
  - tubulata . . . 303
- *Sthereus 4-tuberculatus* . . . 190
- STRANGALIODES . . . 37
- *Strophosomus tesselatus* . . . 93
- TACHYGONINI . . . 265
- Tachygonus centralis . . . 266
  - fulvipes . . . 266
  - *horridus* . . . 266
  - Lecontei . . . 266
  - tardipes . . . 266
- TANYMECINI . . . 81
- Tanymecus confertus . . . 84
  - *confusus* . . . 84
  - lacæna . . . 84
  - *lautus* . . . 89
  - *leucophæus* . . . 84
- Tanypshyrus lemnæ . . . 178
- Thecesternus humeralis . . . 12
- Thinoxenus squalens . . . 75
- Thricolepis inornata . . . 69
  - simulator . . . 69
- Thricomigus luteus . . . 48
- Thysanocnemis fraxini . . . 214
  - helvolus . . . 214
- Thysanoes fimbricornis . . . 370
- TOMICI . . . 352
- TOMICINI . . . 345
- Tomicus avulsus . . . 366
  - calligraphus . . . 363
  - cacographus . . . 364
  - concinnus . . . 367
  - confusus . . . 364
  - dentatus . . . 426
  - emarginatus . . . 364
  - hudsonicus . . . 366
  - interruptus . . . 366
  - latidens . . . 367
  - *mali* . . . 349
  - *materiarius* . . . 350

Page.

- Tomicus oregonis . . . 435
  - *pallipes* . . . 426
  - perturbatus . . . 435
  - pini . . . 365, 426
  - plastographus . . . 364
  - *præfrictus* . . . 365
  - *præmorsus* . . . 363
  - *pusillus* . . . 351
  - *pubipennis* . . . 351
  - *pyri* . . . 360
  - rectus . . . 365
  - tridens . . . 366
- Toxonotus fascicularis . . . 403
- Toxotropis approximatus . . . 398
  - pusillus . . . 398
- TRACHODINI . . . 190
- Trachodes *fasciculatus* . . . 190
  - horridus . . . 191
  - ptinoides . . . 190
  - 4-tuberculatus . . . 190
- TRACHYPHLŒI . . . 76
- Trachyphlœus asperatus . . . 79
  - *melanothrix* . . . 71
- Trichalophus alternatus . . . 119
  - constrictus . . . 119
  - didymus . . . 119
  - planirostris . . . 413
  - seriatus . . . 119
  - simplex . . . 119
- Trichischius crenatus . . . 426
- Trichobaris plumbea . . . 288
  - texana . . . 288
  - trinotata . . . 288
- Triglyphus ater . . . 117
- TRIGONOSCUTÆ . . . 25
- Trigonoscuta pilosa . . . 26
- TROPIDERES . . . 393
- Tropideres bimaculatus . . . 395
  - rectus . . . 395
- TROPIDERINI . . . 392
- TYCHIINI . . . 211
- Tychius *amœnus* . . . 168
  - arator . . . 216
  - *aratus* . . . 217, 432
  - *corniculatus* . . . 174
  - hirtellus . . . 218
  - lineellus . . . 217
  - semisquamosus . . . 217
  - setosus . . . 218
  - sordidus . . . 217
  - tectus . . . 217
- *Tyloderes gemmatus* . . . 54

Page.

- Tyloderma æreum . . . 248
  - baridium . . . 249
  - foveolatum . . . 248
  - fragariæ . . . 248
  - longum . . . 248
  - morbillosum . . . 247
  - variegatum . . . 248
- Tylopterus pallidus . . . 215
  - varius . . . 215
- Wollastonia . . . 341
- XENORCHESTINI . . . 408
- Xenorchestes americanus . . . 408
- XYLEBORI . . . 358
- Xyleborus *affaber* . . . 361
  - biographus . . . 360
  - cælatus . . . 360
  - celsus . . . 360
  - fuscatus . . . 360
  - *granicollis* . . . 361
  - hamatus . . . 361
  - impressus . . . 360
  - obesus . . . 360
  - plagiatus . . . 361
  - planicollis . . . 361
  - pubescens . . . 360
  - pyri . . . 360
  - *pini* . . . 360
  - retusicollis . . . 360
  - *septentrionis* . . . 361
  - sparsus . . . 360
  - tachygraphus . . . 360
  - *vicinus* . . . 360
  - xylographus . . . 360
- XYLOTERI . . . 356
- Xyloterus bivittatus . . . 357, 426
  - *cavifrons* . . . 357
  - politus . . . 358
  - retusus . . . 357
  - scabricollis . . . 358
  - unicolor . . . 358
- Yuccaborus frontalis . . . 334
- Zaglyptus striatus . . . 237
  - sulcatus . . . 237
- Zascelis irrorata . . . 257
  - serripes . . . 257
  - squamigera . . . 257
- Zygobaris conspersa . . . 318
  - convexa . . . 422
  - nitens . . . 318
- ZYGOPINI . . . 259
- *Zygops quercus* . . . 263

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